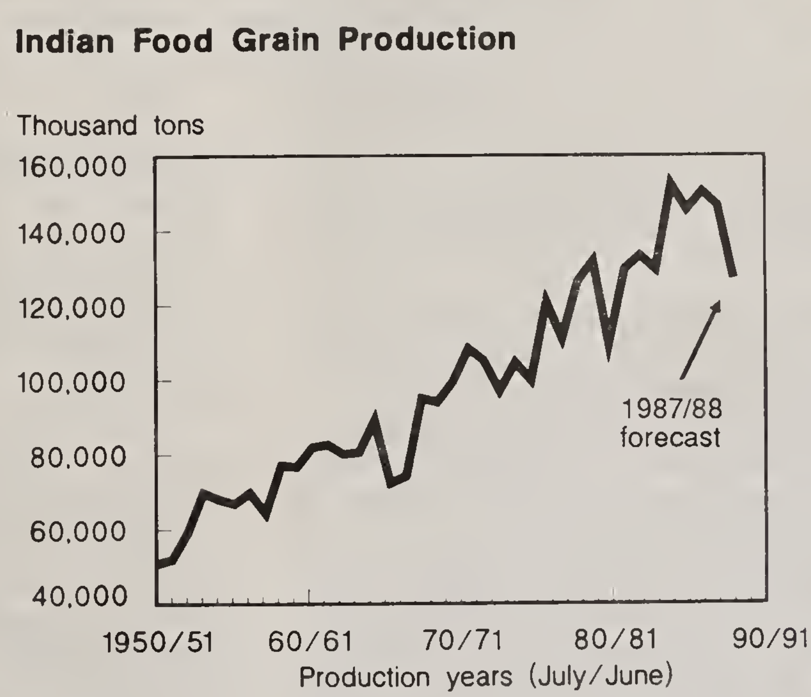
United States
Department of
Agriculture

Economic
Research
Service

RS-87-10
December 1987

South Asia

Situation and Outlook Report



India's 1987/88 food grain crop hit by one of worst droughts in decades.

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Approved by the World Agricultural Outlook Board. Summary released December 15.

South Asia Situation and Outlook is one in a series of 10 regional reports published annually by the Economic Research Service. Other titles in the series: *Western Europe, USSR, East Asia and Oceania, China, Southeast Asia, Western Hemisphere, Eastern Europe, Middle East and North Africa*, and *Sub-Saharan Africa*. Annual subscriptions and single copies are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. For ordering and pricing information, call the GPO order desk at (202) 783-3238.

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Notes: Discussion of Afghanistan has been omitted from this report because of the lack of meaningful information on that country since the Soviet incursion in December 1979. Farm production is normally reported by split years that include all crops grown under the influence of the same monsoon (e.g., 1987/88 includes crops harvested in fall 1987 through spring 1988). Split marketing and fiscal years are frequently used in the analysis and are defined when first used. Unless otherwise specified, rice data are for milled rice, dollars are U.S. dollars, and measures are metric.

Farm Exports to South Asia Likely To Recover in 1987/88

U.S. farm exports to South Asia are forecast to recover to $500–550 million in fiscal 1988, after 4 years of decline. The extent of the recovery will depend heavily on spring 1988 cereal and oilseed harvests in Bangladesh, India, and Sri Lanka, countries that have already sustained severe weather damage to fall 1987 harvests. Because of intense price competition from other suppliers, U.S. export programs will also play an important role in expanding U.S. sales in the region. Wheat exports to South Asia are expected to rebound, although potential sales to India hinge on the 1988 Indian wheat crop. Soybean oil shipments to Pakistan will be up sharply, and sales to the region could rise further if U.S. oil becomes more competitive in the Indian market.

U.S. farm exports to the region fell 33 percent to $345 million in fiscal 1987, one of the lowest totals on record. An abrupt drop in soybean oil, wheat, and tallow exports to Pakistan more than offset increased sales of dairy products and cotton in the region. Ample food grain supplies in India and Pakistan, large Pakistani edible oil stocks, and stiff competition for commercial sales of wheat, soybean oil, and cotton were key constraints. The Export Enhancement Program, P.L.–480, and other export programs accounted for a dominant and increasing share of U.S. exports to the region.

Slowed economic growth, higher inflation, and a weakening balance of payments are forecast for South Asia in 1987/88. Economic growth in India will be negligible because of severe drought damage to farm output, and substantial weather losses are slowing economic growth in Bangladesh and Sri Lanka. Pakistan's economy is expected to be the least affected by dry weather. Inflationary pressure, particularly on food prices, is likely to stimulate food imports to maintain price stability. In most countries, government budgets and the balance of payments will be under increasing pressure because of farm sector losses. Despite likely increases in donor assistance, balance of payments pressures in Bangladesh, India, and Sri Lanka could lead to a retreat from recent import liberalization measures.

Economic growth remained steady in most of South Asia in 1986/87. Pakistan remained the region's fastest growing economy with gains in both farm and non–farm sectors. India sustained above–trend expansion, driven primarily by gains in the industrial sector. There was stronger growth in Bangladesh, but farm sector losses substantially slowed the economies of Nepal and Sri Lanka. Despite measures to curb budget deficits and excess liquidity, inflationary pressures remained a key concern throughout the region. Although most countries posted smaller trade deficits, balance of payments positions remained fragile because of weakening remittances from the Middle East and increasing debt burdens.

South Asian food grain production is forecast to drop about 10 percent in 1987/88, because of drought in India and substantial losses from poor weather elsewhere. India incurred major setbacks to its 1987/88 fall harvests of rice and coarse grains, and its spring 1988 wheat and pulse crops appear threatened by continued dry planting weather. The region's cereal imports are forecast to rise nearly 50 percent to about 4.4 million tons in 1987/88, while exports remain at about 1.9 million. Bangladesh and Sri Lanka are expected to account for all of the increased import demand. However, India could enter the market for wheat and rice if the spring 1988 wheat crop sustains signficant losses.

The region's cereal production was down about 2 percent in 1986/87, primarily because of smaller outturns of rice in India, Nepal, and Sri Lanka, and wheat in India and Pakistan. The region's net cereal imports continued to decline, falling 35 percent to about 1.1 million tons. Wheat imports fell nearly 25 percent to 2.5 million tons, the second lowest on record, mostly because of sharply lower Pakistani demand. However, larger imports by Bangladesh to maintain stocks boosted rice imports to about 450,000 tons. Except in Bangladesh, food grain stocks were ample

throughout the region, and wheat and rice exports by Pakistan and India totaled about 1.9 million tons.

South Asian edible oil imports are forecast at a record of nearly 2.9 million tons in 1987/88 (October/September). Drought-damaged oilseed harvests are expected to boost India's imports to a record-matching 1.7 million tons. Rising demand is forecast to boost Pakistan's imports about 30 percent. Regional palm oil imports are expected to remain at about 1.4 million tons. Soybean oil imports are projected to rise 30 percent to about 860,000 tons, driven primarily by increased shipments to Pakistan through U.S. export programs. Increasingly competitive supplies of rapeseed oil are expected to earn a larger share of the Indian market, boosting regional purchases nearly 40 percent to about 470,000 tons.

The region's edible oil imports were off slightly to about 2.45 million tons in 1986/87. Larger Indian imports resulting from a poor oilseed crop were more than offset by smaller Pakistani purchases because of record production and stocks. Regional palm oil imports fell 17 percent from the 1985/86 record, but palm oil maintained a dominant market share of about 57 percent. Although U.S. sales were off sharply, soybean oil imports were up 5 percent to about 650,000 tons, as smaller Pakistani imports were offset by larger purchases by India and Bangladesh. Rapeseed oil more than doubled its market share to about 340,000 tons, driven by larger Indian purchases.

South Asian cotton production is expected to be unchanged in 1987/88, with poor weather leading to a small setback in Pakistan and only a marginal recovery in India. Cotton exports by the region are projected to drop more than 20 percent to about 3.2 million bales (480 lbs each) in 1987/88 (August/July). All of the decline is expected in India, which because of tightening supplies, may have to import cotton to meet textile export demand. The region's cotton exports continued to surge in 1986/87 to a record of about 4 million bales. Another record harvest in Pakistan and ample supplies, along with liberal export quotas in India, fueled the increase.

U.S. AGRICULTURAL TRADE DEVELOPMENTS AND OUTLOOK

U.S. Farm Exports to South Asia Drop in 1987

U.S. agricultural exports to South Asia fell for the fourth consecutive year in fiscal 1987, dropping 33 percent to $345 million--one of the lowest totals on record. An abrupt decline in GSM-102 sales of soybean oil to Pakistan accounted for the bulk of the losses, but there were also further declines in marketings of wheat and inedible tallow--the other major U.S. exports to the region. Sales of both wheat and tallow were off about 50 percent, again largely because of smaller purchases by Pakistan. However, exports of dairy products and cotton rose substantially, largely because of U.S. export programs.

Table 1--Total U.S. agricultural exports to South Asia (U.S. fiscal years)

	1983	1984	1985	1986	1987
	Million dollars				
Afghanistan	.1	--	--	--	--
Bangladesh	153.2	157.1	205.4	94.1	111.1
India	762.1	375.6	129.4	90.4	93.0
Nepal	2.5	2.6	2.6	2.2	.8
Pakistan	214.8	285.4	229.0	285.3	98.2
Sri Lanka	37.0	46.3	33.9	44.7	42.1
Total	1,169.7	867.0	600.3	516.7	345.2

-- = less than $50,000.

SOURCES: U.S. Department of Commerce, Bureau of the Census; ERS estimates.

Ample supplies of food grains in India and Pakistan, large Pakistani stocks of edible oils, and stiff competition for commercial sales of wheat, soybean oil, tallow, and cotton were the key constraints on U.S. farm exports to South Asia in fiscal 1987. U.S. export programs, including primarily P.L.-480 and the Export Enhancement Program (EEP), accounted for a dominant and increasing share of U.S. exports to the region and were instrumental in preventing a more serious erosion of U.S. market share.

Concessional sales to Bangladesh, Pakistan, and Sri Lanka through P.L.-480,

Title I/III programs accounted for about 45 percent of U.S. exports to the region in fiscal 1987, up from 32 percent in 1986. Although the budget for donations to South Asian countries through P.L.–480, Title II shrank marginally, this program's share of total exports rose from 21 percent in fiscal 1986 to about 31 percent in 1987. Donations through P.L.–480, Section 416, primarily consisting of dairy products as compensation for lost U.S. sugar import quotas, increased from zero in fiscal 1986 to about 3 percent of total sales in 1987.

U.S. sales of soybean oil and wheat through the EEP accounted for about 13 percent of exports to South Asia in fiscal 1987, up from 3 percent in 1986. Although a large share of soybean oil exports to Pakistan are normally conducted through the GSM–102 commercial credit guarantee program, shipments through this program dropped in fiscal 1987 as large Pakistani stocks accumulated from earlier sales led to the deferral of most fiscal 1987 GSM–102 program shipments until 1988. Overall, concessional U.S. export programs contributed about 79 percent of total farm exports to the region in fiscal 1987, and commercial programs, principally the EEP, about 14 percent. Sales not associated with export programs accounted for only about 7 percent of U.S. farm exports to the region.

Recovery in Exports to South Asia Likely in 1988

U.S. farm exports to South Asia are forecast to recover substantially in fiscal 1988. The extent of the recovery will depend heavily on the spring 1988 harvests of cereals and oilseeds in Bangladesh, India, and Sri Lanka, as well as the success of U.S. marketing initiatives. Larger wheat exports are anticipated to Bangladesh and Sri Lanka based on crop losses that have already occurred, but significant wheat sales to India are still considered unlikely unless there is also a major setback in the spring 1988 wheat crop. Soybean oil sales will be up sharply because of program commitments to Pakistan, but could be up even further if U.S. soybean oil can win a larger share of the Indian market.

Substantial gains are also possible in drought relief and other program shipments of commodities such as rice, nonfat dry milk, and corn to Bangladesh, India, and Sri Lanka, depending on the eventual severity of crop losses and the size and type of U.S. program offerings. Based on current trade forecasts and program initiatives, U.S exports the region are projected to rebound to $500–550 million in fiscal 1988, with sales of soybean oil to Pakistan, wheat to Bangladesh and Sri Lanka, and rice to Bangladesh accounting for most of the gains. However, U.S. sales could be substantially higher if India enters the wheat market, elects to import U.S. corn to help offset losses to its coarse grain crop, or buys more U.S. soybean oil than is currently forecast.

Wheat

Exports of wheat to South Asia fell 34 percent to 1.3 million tons in fiscal 1987, one of the lowest totals on record. Sales to Pakistan were off nearly 80 percent as a recovery in production limited U.S. shipments to those provided through the Afghan Refugee Relief Program. Sharply lower sales to Pakistan more than offset larger sales to Bangladesh—all through P.L.–480 and the EEP. Sales to Sri Lanka, also through P.L.–480 and the EEP, remained near the fiscal 1986 level, while relatively small annual P.L.–480, Title II donations to India dropped about 50 percent. There continued to be intense price competition for commercial sales and virtually all U.S. wheat was shipped through export programs; about 45 percent through P.L.–480, Title I/III, about 25 percent through P.L.–480, Title II, and about 30 percent through the EEP.

In fiscal 1988, U.S. wheat exports to the region are forecast to rise to 1.6–1.7 million

Table 2—U.S. exports of wheat and products to South Asia (U.S. fiscal years)

	1983	1984	1985	1986	1987
	1,000 tons				
Bangladesh	803	600	1,073	626	713
India	4,084	1,189	149	123	61
Nepal	8	4	1	0	0
Pakistan	280	174	451	918	195
Sri Lanka	214	269	173	351	356
Total	5,389	2,236	1,847	2,018	1,325

SOURCES: U.S. Department of Commerce, Bureau of the Census; ERS estimates.

tons. All of the increase is expected to occur in Bangladesh, where heavy flood losses to the rice crop and low stocks are expected to boost imports through P.L.-480 and the EEP. Exports to Sri Lanka are forecast to remain near the levels of the last 2 years, but could be higher if losses to the rice crop or U.S. program offerings are larger than currently forecast. Because of high stocks, Pakistan's wheat imports are unlikely to show any growth, unless the 1988 wheat crop sustains substantial losses. Competition for the Bangladesh and Sri Lanka wheat markets among all of the traditional wheat exporters, as well as Saudi Arabia, will remain intense, and prospects for U.S. sales without the assistance of export programs will be minimal.

Wheat exports to the region could be substantially higher than currently forecast if India elects to enter the market in 1987/88. Although India's stocks are projected to be adequate to compensate for drought losses, persistent dry weather could result in abnormally large losses to the spring 1988 wheat harvest and a decision to import wheat as soon as early 1988. India is normally a cash buyer and, although U.S. wheat typically commands a dominant 60-70 percent share of the Indian market, price competitiveness will be essential.

Soybean Oil

Exports of soybean oil to South Asia fell nearly 30 percent in fiscal 1987, to the lowest level since 1981. A sharp drop in sales to Pakistan accounted for all of the setback, offsetting somewhat larger marketings in India and Bangladesh. Pakistan reduced its imports of both palm and soybean oils after record

Table 3--U.S. exports of soybean oil to South Asia (U.S. fiscal years)

	1983	1984	1985	1986	1987
	1,000 tons				
Bangladesh	23.7	14.9	14.3	13.7	37.4
India	54.9	169.4	62.8	37.6	47.1
Nepal	.0	.1	.1	.1	.0
Pakistan	236.7	216.1	168.4	274.9	146.7
Sri Lanka	1.0	.9	.4	.5	.2
Total	316.3	401.4	246.0	326.8	231.3

SOURCES: U.S. Department of Commerce, Bureau of the Census; ERS estimates.

purchases in 1986--including unusually large amounts of U.S. oil through P.L.-480, Title II and GSM-102--created burdensome stocks. Because of an oil glut in 1987, shipment to Pakistan of about 140,000 tons of U.S. soybean oil under a fiscal 1987 GSM-102 allocation was deferred until fiscal 1988.

Price competition among suppliers of soybean, palm and, increasingly, rapeseed oil in the South Asian market remained intense in 1987. Relatively low-priced processed palm oil products from Malaysia and Indonesia continued to command a dominant share of all the markets in the region, but particularly in India, where these products are highly suited to the needs of the public distribution system. Rapeseed oil from Canada and the EC, also supplied primarily on cash terms, earned an increased market share in India.

U.S. soybean oil lost market share in the region in 1987 because of reduced GSM-102 shipments to Pakistan. The U.S. market share fell from 53 percent in 1986 to about 35 percent in 1987. All U.S sales occurred through export programs, including about 70 percent through P.L.-480, Title I programs in Bangladesh and Pakistan, 8 percent through the EEP to India, 11 percent through GSM-102 to Pakistan, and the remainder donated to various countries through P.L.-480, Title II programs.

Exports of soybean oil to South Asia are forecast to more than double in fiscal 1988 because of a large increase in scheduled shipments to Pakistan. U.S. soybean oil exports to Pakistan through GSM-102 and P.L.-480 are likely to surge to a record 400,000 tons in fiscal 1988, and push total exports to the region to about 500,000 tons, the highest since fiscal 1980. Total sales in South Asia could go substantially higher than currently forecast if U.S. soybean oil earns an improved market share in India.

India's edible oil imports are expected to be up in 1988 because of drought losses to oilseed harvests. However, palm and rapeseed oils are currently expected to meet all of India's increased demand because of their broader consumer acceptance, and because they are likely to remain more price competitive than soybean oil. Prospects will remain negligible for any U.S. soybean oil

sales to South Asia that are unassisted by commercial or concessional export programs because of sustained stiff competition from competing commercial suppliers of soybean oil, primarily Brazil, Argentina, and Spain.

Cotton

Cotton exports to South Asia quadrupled to more than 65,000 bales (480 lbs each) in fiscal 1987 as they recovered from an abnormally low level in 1986. Bangladesh is the only traditional cotton importer in the region, and U.S. cotton sold both commercially and through P.L.–480, Title I normally commands a high market share. U.S. marketings plunged in fiscal 1986 because large stocks sharply reduced Bangladesh's import needs and its P.L.–480 program level, and because competition from other suppliers, primarily Pakistan and Sudan, ruled out commercial sales. The recovery in fiscal 1987 stemmed from the resumption of both P.L.–480 shipments and commercial sales, the latter because of more competitive U.S. cotton prices.

Little or no growth is likely in cotton exports to Bangladesh in fiscal 1988 because of reduced import demand, a lower announced P.L.–480 program level, and sustained competition from Pakistan and Sudan for commercial sales. However, prospects for expanded U.S. cotton sales could improve if India's crop losses are worse than currently estimated. Larger crop losses could lead India's textile mills to take advantage of the government's offer to permit raw cotton imports that are linked to yarn and cloth exports. India last imported cotton in 1981/82 from Pakistan and can be expected to be a very price-sensitive cash buyer, should it enter the market.

Other Commodities

Inedible tallow. U.S. exports fell 48 percent to about 43,000 tons valued at $13.2 million in fiscal 1987. Pakistan continued to be the only inedible tallow market in the region, with India sustaining the import ban it implemented in 1983. The United States is normally the major supplier of tallow to Pakistan, followed by Australia. Pakistan's import demand for tallow, primarily for use in soap production, declined in 1987 because of record supplies of imported oils and substitute domestic oils. Some recovery in U.S sales is likely in fiscal 1988, but continued good supplies of domestic oils will likely prevent a rebound to the fiscal 1986 level.

Dairy products. Sales of dairy products soared to $34.3 million in fiscal 1987, a nearly six-fold increase over fiscal 1986 and the highest since fiscal 1975. There were increased marketings of dairy products, primarily nonfat dry milk but also butter oil, to all countries in the region. All sales are believed to have occurred through either P.L.–480, Title II programs or, in the case of India, Section 416 donations as compensation for reduced U.S. sugar quotas. Sales during fiscal 1988 will hinge on program levels agreed on for each country, including the possibility of expanded donations to India for drought relief.

Pulses. Pulse exports to South Asia, consisting primarily of commercial sales of dried peas to India, increased 15 percent to 24,289 tons in fiscal 1987, while declining marginally in value to $6.7 million. India's imports of various types of pulses, the only food imported without quota by private traders, have now increased to more than 300,000 tons annually, and appear to be constrained primarily by the limited supplies of appropriate varieties available in the world market. Competition from other suppliers, including Thailand, Burma, Syria, and Turkey, has prevented any substantial growth in U.S. exports in recent years, despite a steady increase in import demand. Major losses to India's 1987/88 pulse harvests are forecast to lead to sharply higher domestic pulse prices and an increase in imports to about 500,000 tons in 1988, subject to world market supplies. U.S. pulses are likely to gain some share of the increased demand.

ECONOMIC AND POLICY DEVELOPMENTS AND OUTLOOK

Overview

Growth Steady in Most of Region

Economic growth remained steady in most of South Asia in 1986/87, but setbacks in agriculture slowed growth in Sri Lanka and

Nepal. India's economy continued its above-trend expansion, driven primarily by the steadily improving performance of its industrial sector as poor weather again hampered the farm sector. Pakistan remained the fastest growing economy in the region, with solid gains in both farm and non-farm sectors boosting real GDP about 7 percent. Balanced gains in farm and industrial output also contributed to stronger growth of about 4.5 percent in Bangladesh. Sri Lanka and Nepal registered setbacks in food grain production as a result of drought that led to substantial declines in their overall rates of growth.

All countries in the region, with the exception of Pakistan, experienced higher inflation in 1986/87. Excess liquidity stemming from large budget deficits remained a key source of inflationary pressure, and stronger inflation occurred despite successful efforts by most countries to curb monetary expansion through tighter credit policies. Food prices were up in real terms in most countries, in part reflecting weather-induced production setbacks. Food price stability is a key policy priority, and the need to prevent unacceptable price increases contributed to larger food imports by India, Bangladesh, and Sri Lanka in 1986/87.

Balance of Payments Positions Fragile Despite Better Trade Performance

Most South Asian countries posted smaller trade deficits in 1986/87. Export performance was generally better, although gains were typically narrowly based in traditional sectors, particularly textiles and garments in India and Pakistan, and did not reflect much needed gains in non-traditional items. Import bills either fell or grew more slowly, primarily because of lower petroleum and fertilizer prices. However, in many cases, savings on these items were offset by larger imports of raw materials, capital goods and technology resulting from attempts to gradually liberalize these imports to spur industrial growth.

Despite improvement on the trade account, increasingly sluggish and uncertain growth in remittances from the Middle East, a critical source of foreign exchange in all countries in the region, led to continued pressure on current account balances. Debt service obligations increased and, in several countries, foreign reserves fell. The debt and foreign reserve position became particularly serious in Sri Lanka and Bangladesh, but also threatened the continuation of import liberalization measures in India and Pakistan.

Farm Sector Losses Likely To Slow Growth in 1987/88

Economic growth will slow throughout South Asia in 1987/88 because of weather-induced setbacks in farm output. Little or no growth is expected in the Indian economy, following an extended period of relatively fast expansion, because of a severe drought that will reduce agricultural production about 10 percent. Substantial losses are also estimated in Sri Lanka and Nepal because of drought, and in Bangladesh because of unusually severe flood damage. Pakistan's economy is expected to be least affected by the dry weather, largely because of more extensive irrigation.

Slowed growth in industrial output is also anticipated in 1987/88. Agriculture and agro-industry are the principal sectors of employment in all of the region's economies, and losses in farm output will weaken demand for, and production of, industrial and consumer goods. For a number of countries, the projected slowdowns in industrial output will follow a period of steadily improving performance in response to more liberal and stimulative policies. The farm sector losses are also likely to further aggravate the troublesome budgetary deficits faced by all countries in the region. Particularly in India, Bangladesh, and Sri Lanka, the cost of relief operations and difficulties in making needed reductions in producer and consumer subsidies will further pressure government budgets and jeopardize development spending.

Higher inflation, particularly in food prices, is likely throughout the region in 1987/88. Although declining real income growth will constrain effective demand, reduced supplies of farm commodities, as well as the inflationary pressure created by persistent budget deficits and excess domestic liquidity, are likely to spur inflation. Inflationary pressures are likely to be particularly severe in Bangladesh, India, and Sri Lanka. Efforts to maintain food price stability, a top policy priority for countries in

the region, will probably include larger imports of food staples, including cereals, edible oils, and pulses.

Balance of Payments Outlook Weakens

Higher food imports, slowed growth in industrial and farm-based exports, and weakening remittances are expected to place heavy pressure on the foreign debt and reserve position of all South Asian countries in 1987/88. Import bills are forecast to resume their growth following the temporary respite provided by lower petroleum prices last year. In addition, the narrowly based export gains of 1986/87 are unlikely to be repeated, and exportable supplies of farm-based products will decline. Although remittances have proven difficult to forecast, relatively low petroleum prices and slowed economic activity in the Middle East probably will prevent any substantial increase in remittance earnings.

Widening trade and current account deficits are forecast to pose particularly severe problems in Bangladesh, India, and Sri Lanka. In each of these countries, concern with avoiding an unmanageable debt burden could necessitate some retreat from recent policy initiatives that seek to strengthen growth performance, in part by gradually liberalizing imports of strategic raw materials and technology. Increased donor assistance, both in the form of commodities and balance of payments support, is anticipated to help countries to continue policy reforms. The extent to which concessional assistance is eventually provided could have an important impact on how quickly the region resumes its above-trend growth, and whether the pace of import liberalization measures can be sustained.

Bangladesh

Economic Growth Close to Targets

Largely because of gradual recovery in the manufacturing and construction sectors, real GDP rose 4.5 percent in 1986/87 (July/June), compared with 3.9 percent in 1985/86. Growth in total farm production improved to 3.6 percent, up from 3.4 percent the previous year, as a record but rain-damaged rice crop offset lower jute output. Industrial output, boosted by strong growth in garments and larger export demand for frozen shrimp, grew 7.4 percent, compared with 3.8 percent in 1985/86. The service sector expanded by 5.5 percent. The sectoral and overall growth rates were close to the targets set in the Third Five Year Plan (fiscal 1986-90). The plan calls for annual average GDP growth of 5 percent, comprised of sectoral targets of 3.4 percent for agriculture, 7.3 percent for industry, and 6.1 percent for services. Macroeconomic management has been sound in recent years, but GDP growth of 4 percent between 1980-87, average by international standards, is off sharply from the 5.8-percent growth achieved in the 1973-80 period.

Table 4--Economic indicators for Bangladesh

	FY80-FY85 average	FY86	FY87 est.	FY88 proj.
Gross domestic product (billion Taka)				
Current prices	233.6	481.3	555.9	633.7
1972/73 prices	71.3	84.4	88.2	90.0
(% change)	(3.6)	(3.9)	(4.5)	(2.0)
Indices of production				
Agriculture:				
(1976-78=100)	117.1	124.0	125.0	118.8
(% change)	(3.0)	(3.3)	(0.8)	(-5.0)
Industry:				
(1973/74=100)	141.7	149.0	166.0	168.8
(% change)	(2.2)	(-2.0)	(7.4)	(5.5)
Consumer price indices (1973/74=100)				
All items	326.3	436.0	484.0	542.0
(% change)	(13.0)	(9.9)	(11.0)	(12.0)
Food items	306.5	429.5	479.0	536.5
(% change)	(13.7)	(10.7)	(10.0)	(12.0)
Foreign trade ($ million)				
Exports	745	819	982	1,100
(% change)	(7.4)	(-12.3)	(19.9)	(12.0)
Imports	2,478	2,364	2,400	2,544
(% change)	(10.8)	(-10.7)	(1.5)	(6.0)
Trade balance	-1,733	-1,545	-1,418	1,444
For. reserves	317	476	700	680
Debt service	151	468	584	418
Exch. rate				
(Taka/$)	22.2	30.00	30.63	31.00
Population (millions)				
	92.0	100.80	103.40	106.0
(% change)	(2.79)	(2.50)	(2.50)	(2.50)

Note: Data are for Bangladesh fiscal years. FY88 is the year ending June 30, 1988.

SOURCES: Government of Bangladesh, World Bank, International Monetary Fund, ERS estimates.

Despite conservative monetary policy and larger food grain imports in 1986/87, inflation was slightly above 10 percent, the same as in previous years. Delays in food grain shipments and a good, but lower-than-expected aman (main) rice crop caused inflation to accelerate to 17 percent during July-December 1986. Total liquidity expansion was held near 15 percent for the second consecutive year, compared with 33 percent averaged annually during 1982/83-1984/85. Tighter commercial credit policy and improved loan repayments helped curb inflationary pressures. Low jute prices stemmming from large stocks and strong competition from synthetic fibers continued to provide a measure of price stability during the year.

Modest Balance of Payments Surplus Again

Bangladesh's balance of payments position remained weak, but posted a modest surplus for the second consecutive year, as the budget and current account deficits were held to sustainable levels. The current account deficit narrowed slightly. Growth in export earnings outpaced the rise in import expenditures, and workers' remittances, a key source of foreign exchange, showed a surprising increase. Steady growth in the energy sector allowed greater substitution for oil imports and most of the increase in food grain imports was on concessional terms. However, the selective lowering of tariffs and removal of bans, primarily designed to counter smuggling and foster private sector development, were offsetting and stimulated imports.

Exports rose above 1985/86, as earnings from non-traditional products, mainly garments and frozen shrimp, compensated for lower earnings from traditional goods. Garment exports grew because of increased quotas in the U.S. market and more prompt issuing of those quotas within Bangladesh. Traditional exports of jute and tea continued to face weak demand and low world prices. The debt service ratio climbed from 25 percent to over 30 percent, in large part because of loan repayments for large commercial food grain imports in 1984/85.

Exchange rate policy also contributed to a smaller deficit, with the Government effectively depreciating the taka by expanding the list of traded products that are converted at the higher secondary exchange rate, rather than the official rate. This policy encouraged exports, particularly frozen shrimp, leather, and garments. The secondary exchange rate market now accounts for 70 percent of total exports and nearly 40 percent of total imports. While foreign aid commitments were less than the annual average during 1980/81-1984/85, exchange rate changes and the creation of special disbursement accounts boosted foreign aid disbursements 13 percent to $1.5 billion. Foreign reserves rose to $700 million, or about 3 months' import coverage, by June 1987.

Floods Slow Growth in 1987/88

Growth in Bangladesh's GDP is forecast to slow to 1-2 percent in 1987/88. Floods in late July, among the worst in this century, have lowered agricultural and related industrial output. Farm output is expected to contract because of damage to the jute and summer and fall rice crops. Industrial output may slow to 5-6 percent as raw material supplies shrink and domestic demand deflates with per capita income. Monetary policy may be relaxed somewhat to expand credit, but overall liquidity growth is expected to be held near last year's 15 percent to help contain inflationary pressures. The drop in rice production is likely to boost inflation, but increased imports of food grains, mostly concessional, are expected to help keep inflation near 15 percent.

Foreign exchange receipts are forecast to increase 8 percent, due to continued growth in garment exports and foreign aid disbursements. The outlook for workers' remittances is uncertain, but remittances may fall slightly because of more limited employment opportunities in the Middle East. Exports of jute, the largest export, will probably continue to decline. Despite flood losses to the jute crop, a significant recovery in jute prices is unlikely because of large stocks. Overall, increased exports, along with a projected drop in the debt service ratio to about 20 percent because of the retirement of food grain debts, are expected to allow for sustained import growth of about 6 percent.

Policy Reform Continues in 1986/87

In line with the Government's strategy to promote higher economic growth, several

policy reforms were initiated during 1986/87. First, the institutional credit system was strengthened to improve loan recovery rates and allow for greater disbursements to creditworthy borrowers. With loan recovery rates in 1985/86 falling to less than 30 percent in agriculture and 10 percent in industry, long term growth prospects were being seriously undermined. Second, export earnings have been boosted by accelerating the local quota allocation system for garment exports and streamlining export procedures for other non-traditional export companies. During the next 3 years, earnings from garments and other non-traditional exports that face relatively buoyant demand are projected to overtake earnings from traditional exports. Third, the taka was gradually depreciated to ensure continual gains in export competitiveness and to curb growth in imports. Fourth, efforts were made to reduce fertilizer and food subsidies to ease budgetary pressures, while maintaining production incentives to farmers. Fifth, nearly all restrictions on private investment were lifted, both to regain the momentum of investment and growth in the agricultural sector, and to sustain progress in the industrial sector.

India

Monsoon Failure Sets Back Economy in 1987/88

Following an extended period of above-trend expansion, the Indian economy is likely to be dealt a major setback in 1987/88 (April/March) by what was considered the worst monsoon in decades during July-September 1987. Production of kharif (spring planted-fall harvested) crops is down sharply and total farm output will be down about 10 percent according to current crop assessments, but the final outcome will depend on the size of the rabi (fall-planted, spring-harvested) crops. Agriculture normally generates nearly 35 percent of income and 70 percent of employment, and the large farm sector losses will have a widespread economic impact. Growth in industrial and service sector output will be slowed by reduced effective demand and losses in hydro-electric power generation. Overall, growth in real GDP is projected to slow to about 1 percent, after averaging more than 5 percent annually since 1980.

Table 5--Economic indicators for India

	FY80-FY85 average	FY86	FY87 est.	FY88 proj.
	Gross domestic product (Rs. billion)			
Current prices	1,415	2,150	2,430	2,700
1970/71 prices	546.2	649.9	681.1	687.9
(% change)	(5.5)	(5.1)	(4.8)	(1.0)
	Indices of production			
Agriculture:				
(1968-70=100)	140.7	158.0	159.6	143.6
(% change)	(5.3)	(1.9)	(1.0)	(-10.0)
Industry:				
(1980=100)	111.5	142.1	155.4	164.7
(% change)	(6.3)	(8.7)	(8.9)	(6.0)
	Consumer price indices (1960=100)			
All items	471.2	620.0	673.0	740.3
(% change)	(10.2)	(6.5)	(8.5)	(10.0)
Food items	494.0	638.0	697.0	774.0
(% change)	(10.5)	(5.1)	(9.2)	(11.0)
	Foreign trade ($ million) 1/			
Exports	8,331	9,350	10,470	10,800
(% change)	(2.2)	(6.9)	(12.0)	(3.2)
Imports	14,371	17,184	16,860	18,300
(% change)	(1.7)	(19.3)	(-1.9)	(8.5)
Trade balance	-6,040	-7,834	-6,390	-7,500
For. reserves	5,908	6,657	6,729	6,300
Debt service	1,654	2,974	3,761	4,000
Exch. rate (Rs./$)	8.84	12.24	12.79	13.20
	Population (millions)			
	712.44	767.68	783.94	800.33
(% change)	(2.19)	(2.15)	(2.12)	(2.09)

1/ Trade data exclude imports and exports of petroleum under temporary swap arrangements.

Note: Data are for Indian fiscal years. FY88 is year ending March 31, 1988.

SOURCES: Government of India, World Bank, International Monetary Fund, ERS estimates.

The drought will have a substantial negative impact on human welfare, the already troublesome budget deficit, development investment, and the balance of payments. Hardest hit by the drought will be net buyers of food and those whose wage earnings are derived from agriculture, particularly the urban poor and rural landless. The budgetary cost of food, water, and medical relief operations is now roughly estimated at $3-4 billion. To meet these costs, the Government is diverting funds from other areas and considering implementation of additional tax measures to form a drought

relief fund. However, reduced development outlays and a further increase in the budget deficit, already amounting to about 11 percent of GDP, may be necessary. Foreign exchange costs of the drought are estimated at $1-2 billion, at a time when external accounts are already heavily pressured by weak export growth, the cost of import liberalization measures, and sharply higher obligations to the IMF and commercial lenders.

Overall economic losses are not expected to be as severe as those accompanying droughts in 1972/73 and 1979/80 because of expansion of irrigation, improved contingency cropping capabilities, large food grain stocks, and the steadily declining farm sector share in the economy. However, the impacts on growth, consumer welfare, the budget, inflation, and foreign reserves could become substantially higher if persistent dry weather also damages rabi crops of cereals, pulses, and oilseeds.

Economy Again Showed Strong Gains in 1986/87

India's real GDP expanded nearly 5 percent in 1986/87 (April/March), sustaining the above-trend growth observed since the early 1980's. Strong growth was achieved despite another relatively weak performance by the farm sector as dry weather led to declines in the fall 1986 rice and cotton harvests, and prevented any substantial recovery in coarse grain and oilseed harvests. In contrast to the early 1980's when above-trend economic growth was associated largely with rapid farm sector gains, growth since 1984/85 has been driven primarily by steadily accelerating expansion in non-farm sectors. In 1986/87, the industrial sector, which now accounts for about 27 percent of GDP, grew more than 8 percent, while the output of the service sectors, accounting for about 41 percent of GDP, expanded more than 6 percent.

The industrial sector continued to benefit from steady improvement in domestic demand and infrastructural services during 1986/87, as well as gradual easing of regulations on industrial licensing and imports of industrial raw materials and technology. Power generation increased 10.5 percent as improved thermal generation offset drought-induced setbacks in hydroelectric output. Coal production was up about 7.5 percent, and manufacturing production was up about 8 percent. Improved performance in manufacturing and industrial sectors is a prime goal of the current Five Year Plan, and gains for the first 3 years of the plan have matched or exceeded plan targets.

Drought May Threaten Price Stability

Price stability is a key policy objective because of the adverse implications of inflation for low-income consumers, and because of the priority given to meeting real savings and investment targets. Inflation in both wholesale and consumer prices has been held largely in check in recent years, aided by stable petroleum prices and a large surplus of wheat and rice---commodities that account for a large share of the consumer price index.

During 1986/87, these factors helped limit the rise in wholesale and consumer prices to about 5.5 percent and 8.5 percent, respectively. However, despite efforts to impose monetary and fiscal constraint, domestic bank financing of record budget deficits continues to create excess liquidity that poses a threat to price stability. Widening deficits are blamed largely on the poor performance of public corporations, higher subsidy outlays, and efforts to meet public development investment targets.

Despite a decline in real per capita income, inflationary pressures will be intensified during 1987 and 1988 by reduced supplies of food grains and other foods, prospects for higher petroleum prices, and the likelihood that drought relief measures will further enlarge the budget deficit. One of the Government's key means of ensuring food price stability will be increased allocations of cereals, edible oils, sugar, and other foods through the public distribution system (PDS) and other distribution programs. Increased distribution is likely both through the urban-oriented PDS, and through 'food-for work and other types of programs that have been expanded in recent years to meet needs in rural areas.

Balance of Payments Remains Tight

The balance of payments improved marginally in 1986/87, as a smaller trade deficit offset declines in remittances and net

capital inflows. Imports fell about 2 percent following a sharp rise in 1985/86, primarily because lower prices substantially reduced the petroleum and fertilizer import bills. Savings on these items were almost completely offset as liberalization measures contributed to a 20-percent rise in other imports, including capital goods, technology, and industrial raw materials, on top of a 29-percent jump in 1985/86. Exports surged about 12 percent, by far the best performance of recent years, led by gains in jewelry, chemicals, garments, and other manufactures, as well as more traditional primary commodity exports. Key factors behind the export gains were an array of promotional measures that began to have an increasing effect on exporters, and a substantial improvement in the real exchange rate of the rupee that enhanced the relative profitability of exports.

Adverse developments during 1986/87 in the external accounts included declines in worker remittances, a key source of foreign exchange, because of slowed economic growth in the Middle East, and a sharply reduced surplus in the capital account because of higher debt repayments. Debt service obligations and the debt service ratio have increased markedly in recent years, reflecting more borrowing on commercial terms and large repayments to the IMF for structural adjustment loans provided in the early 1980's.

The balance-of-payments situation is projected to deteriorate in 1987/88, as foreign exchange losses associated with the drought are added to already existing prospects for a wider trade deficit, smaller remittances, and higher debt service. Export growth is projected to slow after the abnormally large gains in 1986/87, and because of shortages of farm products--normally 30 percent of exports--and power generation stemming from the drought. Import growth is likely to be stronger because of a larger petroleum import bill, sustained growth in non-oil imports if liberalization measures remain in effect, and increased purchases of edible oils, pulses, and other supplies to cope with the drought. The foreign exchange costs of the drought are estimated at $1-2 billion, but could be much higher if cereal imports are needed. The trade deficit is currently projected to rise to about $7.5 billion and, combined with no growth in remittances and higher debt service payments of about $4 million, should lead to a decline in foreign reserves. However, concessional credits and commodity assistance from bilateral and multilateral donors, or reimposition of some import constraints, could lessen the adverse effects of the drought on foreign reserves and debt.

Financial and Political Pressure Threaten Reform Measures

Deregulation of domestic industry, gradual liberalization of raw material and technology imports, and export promotion have been prominent thrusts of Indian economic policy in the 1980's. Key objectives are to improve the efficiency and growth performance of industry through competition and improved technology, and to augment already high domestic savings with foreign capital. These policies have helped stimulate higher industrial output and exports, but have created domestic political frictions and, at least in the near term, increased imports and pressure on the balance of payments. Political pressures also make it difficult to meet development outlay targets and reduce large budget deficits by making unpopular decisions on taxes and subsidies on such items as fertilizer and food grains, particularly during a drought. The recent deferral of a long-expected move to reduce fertilizer production subsidies may be an indicator of the Government's limited options on the budget front.

The additional budget and balance-of-payment pressures resulting from the drought could place the future of India's policy reforms--and prospects for sustained high growth--in jeopardy. Policymakers are concerned about becoming ensnarled in a debt trap, and could order a retreat from reform measures that would also ease some political tensions, if the debt implications become threatening. India's debt position has always been tightly controlled, in part because the economy is very large relative to its imports and exports and the debt level could become unmanageable very quickly. To keep debt manageable, policymakers will increasingly be faced with a tradeoff between backtracking to the old regime of curbing imports to maintain high public investment, or curtailing investment to sustain momentum on import liberalization. Either option imposes a tax on

future growth, as would more burdensome foreign debt, but the backtracking option may have stronger political appeal.

Multilateral and bilateral donors, including the World Bank, Canada, the European Community, Japan, and the United States, are offering assistance to India to help cope with the costs of the drought. The World Bank, with a large stake in India's policy reforms, has provided $350 million of partly concessional import credits and may provide additional assistance. Japan has offered about $200 million in commodity import credits and also may provide additional credits to help maintain spending on development projects. Canada has reportedly provided about $150 million over several years for commodity and technical assistance in the oilseed sector. Details of the EC and US offers are not yet known, but are likely to involve import credits and donations for oilseeds, edible oils, food grains, and milk products.

Nepal

Economy Limps Along in 1986/87

The economy of Nepal is extremely dependent on rainfed agriculture. In the recently completed crop year, July/June 1986/87, food grain production dropped about 8 percent, causing the rate of GDP growth to slow to about 2 percent. Economic growth would have been even less were it not for a dramatic 28-percent increase in industrial output, driven by gains in cement, brick, shoe, sugar, and cigarette production. Despite the decrease in food grain supply, inflation slowed to about 8 percent compared with more than 20 percent the previous year, as the Government brought growth in the money supply under control. Nepal has long had a deficit in its current account and trade balances. However, the current account deficit continues to be met by substantial amounts of highly concessional foreign assistance. In 1986/87 the trade balance worsened because of a sharp decline in exports of garments and leather. Tourism receipts spurted more than 20 percent with the opening of the Tibet region of China, which borders Nepal.

To further rationalize the foreign exchange regime, the Government has now included the Indian rupee in the basket of currencies to which the Nepali rupee is pegged. India is by far Nepal's largest trading partner. By the end of 1985/86, reserves had stabilized at about 3.5 months of imports, after falling for 4 years, and they are expected to stay at that level. These exchange rate changes and other changes in economic policy are part of the structural adjustments that Nepal has made with the support of the World Bank and the IMF.

Growth To Remain Moderate

Nepal's economy is projected to grow somewhat faster in 1987/88. However, it will still be restrained by food grain production, which is unlikely to increase. Food prices in some chronically-deficit hill areas have risen because of flood damage to trails and bridges, and it is not unusual for some food to move across the border to deficit areas in India. Thus there may be some additional inflationary pressure. Despite various adjustment measures, the trade balance is expected to worsen considerably to a deficit of over $450 million. Even with vigorous promotion by the Government, exports are not likely to increase rapidly, while imports of raw materials and consumer goods continue to add to the trade bill.

Pakistan

Continued Strong Growth in 1986/87

Pakistan's economy grew 7 percent during 1986/87 (July/June), registering its third consecutive year of growth at 7 percent or more and exceeding the Government's target of 6.8 percent. The agricultural sector expanded close to 7 percent, led by record rice and cotton crops. Manufacturing output increased 7.4 percent, slightly less than 1985/86. Industrial growth was led by cement, sugar, and cotton yarn and cloth, while the output of leather, vegetable ghee (hydrogenated cooking oil), and transport equipment declined. In the key textile sector, cotton yarn production increased by about 15 percent.

Inflation, as measured by consumer prices, slowed to about 4 percent in 1986/87, despite a small increase in the rate of inflation for food. The Government slowed the growth of domestic credit only slightly

Table 6--Economic indicators for Pakistan

	FY80-FY85 average	FY86	FY87 est.	FY88 proj.
	Gross domestic product (Rs. billion)			
Current prices	313.0	485.2	537.3	598.0
1959/60 prices	61.0	76.7	82.1	87.2
(% change)	(6.8)	(7.3)	(7.0)	(6.2)
	Index of agricultural production			
(1975/76=100)	128	152	162	170
(% change)	(5.3)	(9.4)	(6.6)	(5.0)
	Consumer price index (1975/76=100)			
All items	179.1	224.2	232.9	244.5
(% change)	(8.9)	(4.8)	(3.9)	(5.0)
	Foreign trade ($ million)			
Exports	2,541	2,947	3,637	4,183
(% change)	(8.8)	(19.1)	(23.4)	(15.0)
Imports	5,636	5,404	5,362	5,845
(% change)	(8.3)	(-10.1)	(-0.8)	(9.0)
Trade balance	-3,095	-2,457	-1,725	-1,662
For. reserves	1,154	915	865	292
Debt service	1,003	1,732	1,973	1,997
Exch. rate (Rs./$)	11.96	16.13	17.25	17.50
	Population (millions)			
	87.9	97.7	100.7	103.8
(% change)	(3.1)	(3.1)	(3.1)	(3.1)

NOTE: Data are for Pakistan fiscal years. FY88 is the year ending June 30, 1988.

SOURCES: Government of Pakistan, World Bank, International Monetary Fund, ERS estimates.

from the 15 percent of the year before. The budget deficit, however, continued at a troublesome level, even though lower world prices of major administered imports, like petroleum and fertilizer, boosted government revenue from domestic sales of these items. To cover the persistent budget deficit, the Government sharply increased its borrowing from the domestic banking system.

Trade Balance Improves

Pakistan's balance of trade improved substantially for the second year in a row in 1986/87. Exports rose over 26 percent as receipts from cotton yarn, cotton fabrics, wool carpets, leather, and fish products all showed large gains. Cotton yarn exports almost doubled to nearly $500 million. The cost of imports rose only 2 percent because of lower prices for petroleum products, edible oils, and fertilizer. The structure of the balance of payments remained weak, however, as remittances continued to trend downward, falling by about 11 percent, and non-traditional exports stagnated. Debt service increased further to a troubling 28 percent of current receipts.

The Government continued its flexible exchange rate management regime to promote exports. In 1986/87, the rupee declined by about 6 percent against the dollar, and substantially more against the currencies of Pakistan's major trading partners. Thus while imports rose in rupee terms, they fell by about $40 million in dollar terms. The trade imbalance fell in both rupee and dollar terms, to about half what it was 2 years before. Most export compensatory rebates, which were part of an export promotion effort initiated in 1984/85, were abolished due to budgetary pressures and widespread abuses.

Steady Growth Forecast for 1987/88

The Government of Pakistan has targeted real GDP growth of 6.2 percent in 1987/88, with 5-percent growth in agricultural production (3.6 percent in major crops) and 8.0 percent growth in industrial output. The agricultural growth rate, if realized, would reflect a further slowing from 9.4 percent in 1985/86 and 6.6 percent in 1986/87. The agricultural targets included a small increase in rice production and a slight decrease in cotton, combined with a solid recovery in wheat. It appears that both cotton and rice have fallen below target and that the wheat target of 15 million tons may also not be achieved.

To finance the budget deficit that has tended to increase as a percent of GDP during the 1980's, the Government has proposed higher energy prices and a "defense tax" of 5 percent on goods and 10 percent on income and wealth. It has already imposed a duty on rapidly expanding cotton yarn exports. However, continued expansion of domestic bank credit is likely to further boost inflationary pressures and, together with slowed growth in farm output, is likely to result in higher inflation in 1987/88.

The balance-of-payments outlook for 1987/88 is still rather precarious. Although imports are projected to increase only about 9

percent while exports rise 15 percent, the underlying weaknesses of the external position are not likely to improve. Remittances, which as recently as 1984/85 were equal to merchandise export earnings, will continue to decline due to sluggish economic activity in the Middle East. Substantial diversification of exports is not likely. Debt service payments are expected to continue their increase in absolute terms and ease only slightly as a percent of current receipts. An important variable in the short-term outlook is the new export policy for rice and cotton, under which the private sector could participate in exports. At present, there is great uncertainty about the effects of this policy when, or if, it is implemented.

Sri Lanka

Farm and Service Sectors Slow Economy

After sustaining growth of more than 5 percent since 1979, the economy's rate of growth slowed to 4.4 percent in 1986--its lowest rate in a decade. Agriculture, accounting for about one-fourth of GDP and half of total employment, led the deceleration as growth slowed to 1 percent in 1986, compared with 8.7 percent in 1985 and an average annual rate of 4 percent during 1980-84. Drought and low commodity prices adversely affected the farm economy, particularly the rice sector.

Growth of 4 percent in the service sector, which accounts for half of GDP, remained below the 1982-86 average of 5.5 percent for the second consecutive year. This sector's weakening performance largely reflects slower growth in retailing and wholesaling, which has offset increases in government salaries and defense spending. Manufacturing, contributing about 15 percent of GDP, showed stronger growth of 8 percent in 1986, compared with 5 percent the previous year and an average rate of 6.6 percent during 1982-86. The increase stemmed largely from the recovery in output of the state-owned oil refinery after its biannual maintenance, in addition to strong growth in the private sector's output of food products, beverages, tobacco products, textiles, and garments.

Although inflation accelerated to about 8 percent in 1986, partly because of higher food prices, it remained well below average annual levels during 1980-84. Reduced domestic supplies of rice, fish, and vegetables were largely responsible for pressure on food prices. Further increases in alcohol and cigarette taxes in November 1986 also contributed to inflation. However, continual expansion of domestic bank credit to cover increasing government spending on civil defense activities was also a key source of inflation.

Table 7--Economic indicators for Sri Lanka

	FY80-FY84 average	FY85	FY86 est.	FY87 proj.
	Gross domestic product (Rs. billion)			
Current prices	105.2	160.6	183.1	213.0
1970 prices	21.8	25.2	26.3	27.1
(% change)	(5.2)	(5.0)	(4.4)	(3.0)
	Index of agricultural production			
(1968=100)	147.8	171.7	173.4	166.7
(% change)	(4.0)	(8.7)	(1.0)	(-4.0)
	Consumer price indices (1978=100)			
All items	187.6	246.4	266.0	300.6
(% change)	(14.3)	(1.4)	(8.0)	(13.0)
Food items	193.2	252.0	270.1	(310.6)
(% change)	(14.7)	(.1)	(7.2)	(15.0)
	Foreign trade ($ million)			
Exports	1,141	1,315	1,204	1,300
(% change)	(6.2)	(40.2)	(-8.4)	(8.0)
Imports	1,941	2,044	1,957	2,000
(% change)	(-1.3)	(20.3)	(-4.3)	(2.3)
Trade balance	-800	-729	-753	-700
For. reserves	346	451	353	266
Debt service	291	368	457	570
Exch. rate (Rs./$)	21.11	27.16	28.02	29.4
	Population (millions)			
	15.6	16.5	16.8	17.1
(% change)	(1.79)	(1.85)	(1.82)	(1.79)

NOTE: Data are for Sri Lankan fiscal years. FY87 is the year ending December 31, 1987.

SOURCES: Government of Sri Lanka, World Bank, International Monetary Fund, ERS estimates.

Balance of Payments Remains Precarious

Sri Lanka's trade deficit deteriorated further to $753 million in 1986 ($729 million in 1985), as the 4-percent decline in imports was more than offset by an 8-percent fall in export earnings. Export earnings fell to $1.2 billion mostly because of lower export volumes, and despite improved-- but still

low--prices for major commodity exports of petroleum, tea, coconuts, and rubber. Moderate growth in textile and garment exports, which contribute about 30 percent to export earnings, caused garments to replace tea as the country's top foreign exchange earner. The drop in tea revenues was attributed to low prices and fears that Sri Lankan tea had been contaminated. Exports of other non-traditional items, such as gems (particularly diamonds), seafood products, and electrical appliances, also increased. Import volumes were generally maintained in 1986, but the value fell by 4 percent to $1.96 billion, largely because of lower prices for petroleum, fertilizer, and food. While the steady depreciation of the rupee has helped to dampen import demand, export competitiveness has not yet been substantially improved because the rupee remains relatively strong against the currencies of major competitor countries.

The overall current account deficit (excluding grants), amounting to about 9 percent of GDP, narrowed slightly to $595 million in 1986 after more than doubling in 1985. The downtrend in foreign aid continued, reflecting reduced project financing, grants, and commodity aid. Growth in defense spending led to cuts in domestic development expenditures, also reducing the aid associated with those projects. The service account deficit persisted as tourist receipts, which had been increasing annually by 12 percent in the early 1980's, continued their downward spiral and workers' remittances from the Middle East fell for the second consecutive year.

Sri Lanka's foreign debt continues to grow and increase its burden on the economy. Weakness in foreign exchange earnings and lumping of debt obligations has caused the ratio of debt service payments to current account receipts to increase from an average of 18 percent during 1982-84 to 23 percent in 1986. However, restrictions on commercial and short-term borrowing, and substantially lower current account deficits are now slowing the creation of new debt.

Sluggish Growth Likely To Continue in 1987

Economic growth is forecast to slow to 3 percent in 1987, largely because of drought-reduced agricultural production, particularly of rice and coconuts. Other factors likely to dampen growth are lower tourist receipts and investment, reduced local supplies and demand for industrial goods, weak performance by public companies, reduced government development spending, and reduced disbursement of foreign assistance. A top government priority is to cap the budget deficit, which is to be accomplished mainly through reduced spending because revenues are projected to show little growth. However, emergency food assistance programs, launched to help offset drought losses, have strained the Government's already weak financial position. The Government has plans to review the costly food stamp program, aimed at the roughly 7 million people (40 percent of the population) earning Rs.300 ($10) or less per month.

Largely because of near completion of the grant-financed Mahaweli irrigation project, foreign aid flows, which have played an important role in Sri Lanka, may be difficult to sustain. Despite the peace accord signed in July 1987, ongoing outbreaks of violence are unlikely to permit the proposed increases in defense spending from being shifted to other priorities, such as programs geared toward diversifying of agricultural production and exports. Inflationary pressures have continued in 1987, aggravated by the effects of drought-reduced supplies on food prices.

The trade deficit is forecast to narrow to about $700 million in 1987, as non-traditional exports boost merchandise export earnings at a faster pace than imports. Even so, the debt service ratio is forecast to continue to rise and reach about 25 percent, as the growth in debt payments outpaces growth in current receipts. The weak outlook for workers' remittances, traditional commodity exports, investment, and tourism is expected to place continued pressure on the foreign debt.

Policies Aim At Boosting Investment

In an attempt to reverse declining private investment and rising interest rates during 1987, the Government reduced reserve requirements, allowed greater market determination of treasury bill rates, and expanded access to lower interest rates of the Central Bank refinancing facilities. The measures were targeted at the agricultural, export, and industrial sectors, but were

counteracted by waning investor confidence and inefficiencies in the banking system. Measures taken to boost revenues included increases in some import duties, the imposition of a 2-percent duty on letters of credit for most imports, and a special levy on the Ceylon Petroleum Corporation.

Food self-sufficiency continues to be a top government priority. Rice, as the staple cereal in Sri Lankan diets, remains the dominant concern, although there are efforts to diversify agricultural production and exports through subsidies and floor price schemes. The Government also continues to provide subsidies and other measures designed to reverse the downtrend in tree crop production. However, with probable cuts in the 1987 budget, these subsidies are likely to be curtailed. Efforts to initiate proposed price stabilization funds for tea, coconuts, and rubber have been largely ineffective.

FOOD GRAIN SECTOR DEVELOPMENTS AND OUTLOOK

Overview

1987/88 Harvests Damaged by Drought

South Asian food grain output is expected to drop sharply in 1987/88 because of severe drought in India and substantial drought and flood losses elsewhere in the region. Total food grain production is likely to be down more than 10 percent. While yield losses stemming from poor weather will account for the bulk of the decline, abandonment and reduced plantings will also lead to about a 4-percent drop in harvested area. With the region's fall harvests of rice and coarse grains completed, by far the largest impact of the drought has been in India, where rice production is down about 20 percent and the coarse grain harvest is off about 16 percent. India's corn, millet, and sorghum crops, already affected by consecutive years of poor weather, are estimated to be the smallest since 1972/73.

Harvests of rice, which normally account for half of South Asia's cereal production, were down throughout the region in 1987/88, in most cases because of the failure of the 1987 monsoon to provide the normal abundance of rainfall. Key rice surplus areas of northwest India had rainfall 60 percent or more below average, severely taxing available irrigation water supplies. Elsewhere, production setbacks stemming from dry weather included an estimated 12-percent drop in Pakistan and a 15-percent drop in Sri Lanka. In Bangladesh, unusually severe flooding damaged the summer and fall rice crops, leading to an estimated 4-percent decline in rice output.

Table 8--Production of cereals in South Asia 1/

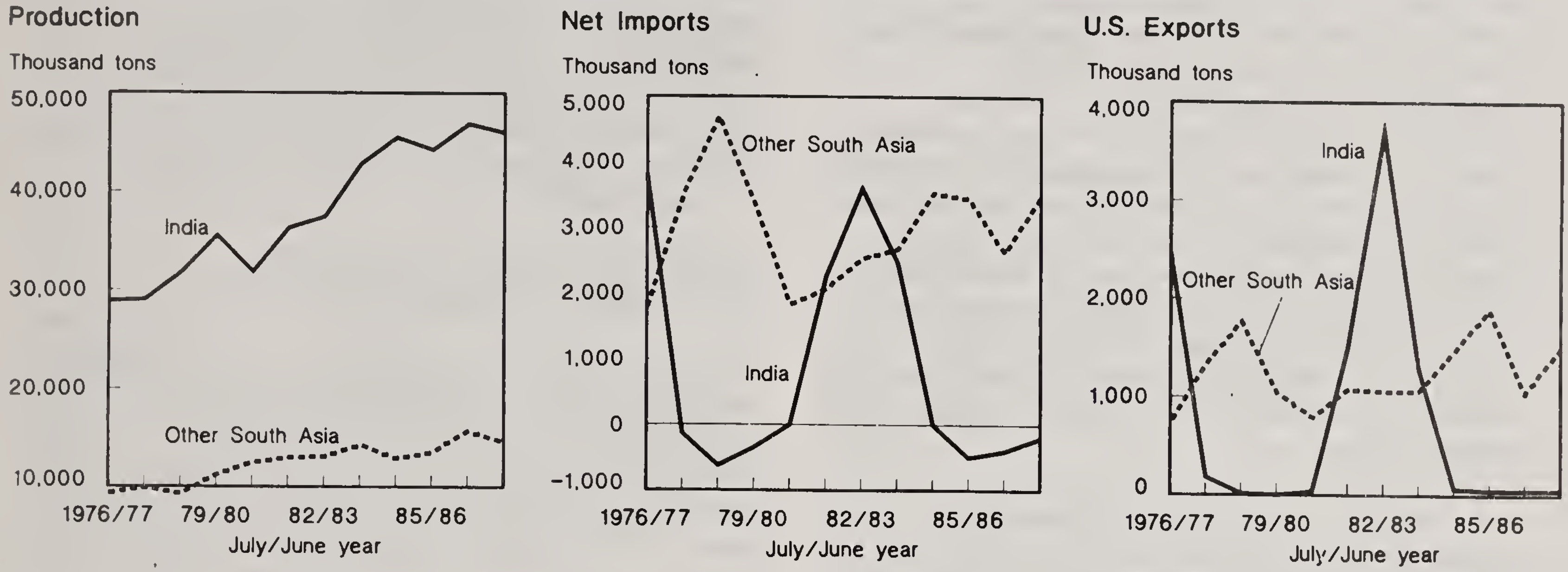
Grain	1984/85	1985/86	1986/87 est.	1987/88 proj.
	1,000 tons			
Wheat				
Bangladesh	1,464	1,042	1,091	1,400
India	44,069	46,885	46,000	45,000
Nepal	534	598	686	690
Pakistan	11,703	13,922	12,200	14,500
Total	57,403	62,447	59,977	61,590
Rice (milled)				
Bangladesh	14,620	15,040	15,406	14,750
India	58,337	64,153	60,000	48,000
Nepal	1,804	1,867	1,580	1,580
Pakistan	3,315	2,919	3,522	3,100
Sri Lanka	1,640	1,809	1,765	1,500
Total	79,716	85,788	82,273	68,930
Coarse grains				
Bangladesh	52	52	52	52
India	31,170	26,468	27,800	23,300
Nepal	974	1,027	1,031	1,033
Pakistan	1,627	1,589	1,738	1,595
Sri Lanka	16	16	16	15
Total	33,839	29,152	30,637	25,995

1/ Production reported by local July/June crop years, except Sri Lanka where production is for January/December of the first year.

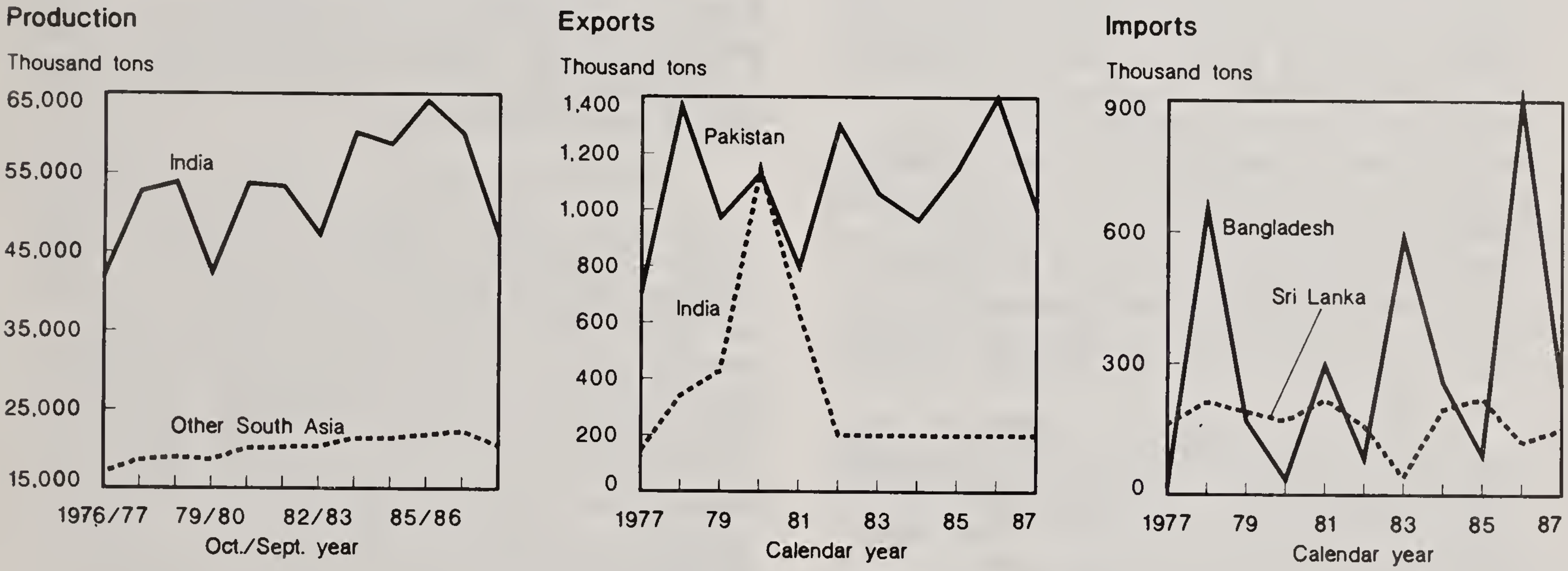
SOURCES: Official government data in each country, USDA estimates. Official USDA forecasts of spring 1988 harvests are not yet available. 1987/88 forecasts for wheat and coarse grains in India and wheat in Pakistan are not official USDA forecasts.

The extent of India's total food grain production losses in 1987/88 will depend on rainfall during November-March. However, the major rabi (fall-planted, spring-harvested) crops of wheat and pulses are already threatened by poor soil moisture and reduced supplies of irrigation water, and some losses are likely. The same drought-affected areas of northwest India that normally produce most of the surplus rice also produce the bulk of the wheat surplus. Although about 90 percent of wheat land in these areas is normally protected by irrigation, depleted supplies of

Wheat



Rice



surface and groundwater and shortages of power for pumping will leave more of the crop dependent on rainfall.

The outlook for wheat harvests is brighter elsewhere in the region. Although pre-planting weather was drier than normal, Pakistan's wheat crop is likely to be larger than last year's because dry summer weather has been followed by more substantial rainfall, and a new early-maturing cotton variety permits more timely wheat planting and higher yields. And, unless flooding persists, ample soil moisture and strengthened price incentives are expected to lead to a recovery in wheat production in Bangladesh following consecutive poor crops.

Larger Food Grain Imports, Smaller Exports Forecast

Because of production setbacks, South Asian countries are forecast to increase imports of cereals and pulses, and to reduce wheat and rice exports during 1987/88. Net cereal imports are forecast to rebound to 2.5 million tons, as imports of wheat, rice, and coarse grains rise from about 3.0 million tons in 1986/87 (July/June) to about 4.4 million in 1987/88. Exports of wheat and rice are forecast to hold steady at about 1.9 million tons in 1987/88.

Although no Indian imports of wheat or rice are factored into the current forecast,

India's trade outlook remains heavily dependent on 1988 wheat production prospects, and the uncertain outcome of the Government's domestic procurement campaigns for wheat and rice. India is expected to sharply reduce its large stocks in order to distribute a record amount of cereals through its public distribution system and help maintain consumer price stability. However, if procurement and stocks prove inadequate, the Government will probably import wheat and possibly rice to ensure price stability. Increased Indian imports of pulses and coarse grains are considered the most probable course during 1987/88.

Larger imports by Bangladesh are expected to account for the bulk of the region's increased wheat and rice imports in 1987/88. Low stocks and a poor rice crop are expected to push Bangladesh's cereal imports from 1.8 million tons in 1986/87 to about 3.1 million, including about 2.4 million of wheat and .7 million of rice. Roughly 70 percent of Bangladesh's imports are likely to be on concessional terms, helping to rebuild food grain stocks to more secure levels. Production losses and low stocks are also expected to boost Sri Lanka's cereal imports, with wheat purchases forecast to be up 26 percent to .7 million tons in 1987/88, and calendar 1988 rice imports projected to rise to about 150,000 tons.

No growth is expected in Pakistan's wheat imports in 1987/88, as large stocks continue to limit imports to those donated through the Afghan Refugee Relief Program. Rice exports by Pakistan, the region's major cereal exporter, are currently projected to drop from 1.3 million tons in 1987/88 to 1.1 million in 1987/88, but the recent surge in world rice prices could lead to higher Pakistani exports. Relatively small exports of wheat and rice by India are likely to decline in 1987/88 because of the drought.

Assuming no imports by India, U.S. wheat exports to South Asia are forecast to be up more than 40 percent to 1.5 million tons in 1987/88 (July/June). The U.S. market share is expected to remain near 1986/87's 43 percent, with sales occurring almost exclusively through concessional or commercial export programs. Bangladesh will account for two-thirds of the total, followed by Sri Lanka. U.S exports of rice to the region are currently projected to fall from about 127,000 tons in calendar 1987, mostly to Bangladesh, to about 100,000 tons split between Bangladesh and Sri Lanka in 1988. U.S. exports of coarse grains are projected at 70,000 tons, but actual sales could be substantially higher or lower depending on the outcome of programs offered to India for drought relief.

South Asian Food Grain Production Down Slightly in 1986/87

South Asian cereal production was down about 2 percent in 1986/87, with smaller outturns of rice and wheat more than offsetting a marginal recovery in coarse grain production. Rice harvests were down from their 1985/86 peaks in India, Nepal, and Sri Lanka, primarily because of dry weather. These declines more than offset record harvests in Bangladesh and Pakistan. Pakistan's 1986/87 rice crop was up 20 percent, as good weather and increased fertilizer use stimulated a strong recovery from a poor 1985/86 crop.

Wheat production in the region fell about 3 percent in 1986/87 because of smaller estimated harvests in India and Pakistan. Dry weather during planting, coupled with extremely heavy rains during the April-May harvest, affected the wheat outturns in India and Pakistan, with the most substantial losses likely occurring in Pakistan. Bangladesh's 1986/87 wheat crop recovered only marginally from the poor 1985/86 harvest, as its wheat production drive was stalled for the second straight year by poor weather and weakened producer incentives.

Larger crops in India and Pakistan boosted the region's 1986/87 coarse grain harvest about 5 percent. However, while Pakistan's crop was a record, Indian production was up only marginally after a major setback in 1985/86 and remained well below the record. As in 1985/86, Indian coarse grain harvests continued to be plagued by dry weather in key rainfed producing areas.

Net Cereal Imports Continued To Shrink in 1986/87

The region's net imports of cereals fell from about 1.7 million tons in 1985/86 to about 1.1 million in 1986/87, continuing their declining trend. Wheat imports fell from 3.3

million tons in 1985/86 to about 2.5 million in 1986/87, the lowest since 1980/81 and the second smallest on record. Smaller purchases by Sri Lanka and, particularly, Pakistan accounted for the decline. Bangladesh increased its wheat imports to 1.5 million tons to account for the bulk of the region's imports, followed by Sri Lanka with 555,000 tons. Despite larger imports, Bangladesh's wheat stocks fell well below the food security target because of increased government distribution to maintain price stability. Stocks of wheat were ample elsewhere in the region, with Pakistan's stocks building to a record 3.9 million tons and Indian stocks also remaining well above the official target. Indian wheat exports during 1986/87 are estimated at 400,000 tons, the same as 1985/86.

South Asian rice imports were up nearly 60 percent to about 450,000 tons in 1986/87, with Bangladesh and Sri Lanka accounting for all of the total and Bangladesh accounting for the bulk of the increase. Bangladesh's rice imports rebounded sharply from an abnormally low level in 1985/86 in order to maintain adequate levels of stocks and public distribution. Closing stocks of rice were generally comfortable throughout the region in 1986/87, except in Bangladesh, where they were well below target. India's rice stocks remained above target despite record levels of subsidized distribution. Rice exports by both Pakistan and India are estimated to have held steady and totaled about 1.5 million tons in 1986/87. Pakistan exported about 1.3 million tons of IRRI and basmati varieties, while low world prices continued to limit Indian exports to about 200,000 tons of basmati.

The U.S. share of South Asian wheat imports was about 41 percent in 1986/87, down from 57 percent in 1985/86 and the 1980/81–1985/86 average of 55 percent. The bulk of U.S. exports of about 1.1 million tons occurred through various P.L. 480 programs throughout the region, and the remainder through EEP sales to Sri Lanka. Competitors, including Australia, Argentina, Canada, and Saudi Arabia, accounted for most commercial wheat purchases, while the United States was the principal concessional wheat supplier. Neighboring traditional suppliers, including Thailand, Burma, and Pakistan, continued to dominate the region's imports of generally low quality rice. The U.S. share of the region's rice market consisted entirely of P.L. 480 sales to Bangladesh.

Bangladesh

Growth in Food Grain Output Slows

Bangladesh's 1986/87 food grain harvest is estimated at a record 16.5 million tons, up 2.6 percent from 1985/86, because of gains in the spring- and summer-harvested rice crops. Heavy rains prevented the main, fall-harvested rice crop from matching the 1985/86 record. However, total rice output increased 2.4 percent and set another record at 15.4 million tons, partly because an improved rice/fertilizer price ratio boosted both fertilizer use and yields of the spring rice crop. Spring rice production exceeded 4 million tons for the first time, in part because low jute prices encouraged farmers to switch land to rice.

The 1986/87 wheat crop, harvested during April–May 1987, increased slightly to 1.1 million tons, because of an 11-percent increase in area. However, average yields fell 4 percent, following an 11-percent drop in 1985/86, because of excessive moisture at planting and unusually hot weather.

Tight supplies and low government stocks edged wheat prices upward throughout 1986/87, leading the Government to increase food grain distribution through open market

Bangladesh: Open Market Food Grain Prices

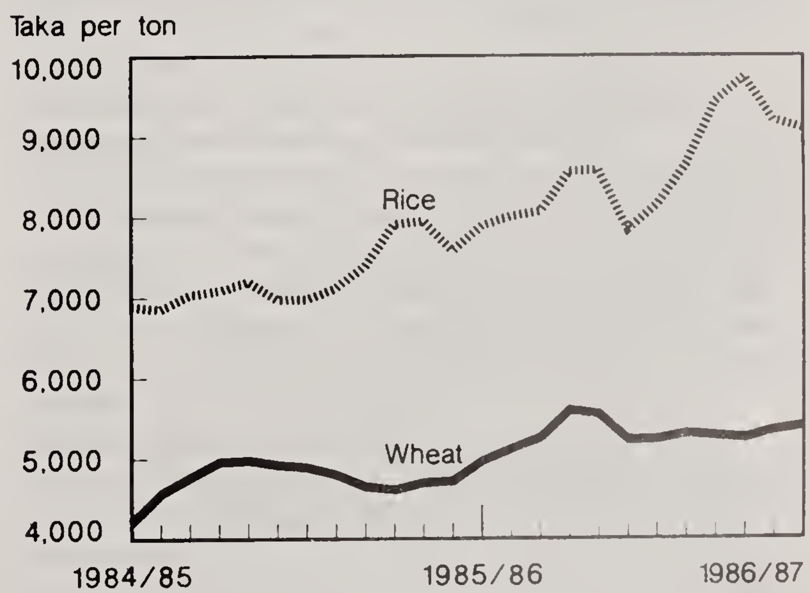


Table 9--Summary of government food grain operations in Bangladesh

	FY80-FY84 average	FY1985	FY1986	FY1987 est.	FY1988 proj.
			1,000 tons		
Rice					
Procurement	338	134	219	137	125
Net imports	356	690	39	261	650
Public distribution	597	407	373	495	725
Ending stocks	370	475	353	219	249
Wheat					
Procurement	93	210	130	53	150
Net imports	1,507	1,898	1,164	1,500	2,400
Public distribution	1,411	2,173	1,168	1,624	2,000
Ending stocks	480	542	623	490	890
Total					
Procurement	431	344	349	190	275
Net imports	1,863	2,588	1,203	1,761	3,050
Public distribution	2,008	2,580	1,541	2,119	2,725
Ending stocks	850	1,017	976	709	1,139

Note: Annual supply and use data do not balance because of storage losses and reporting lags.

SOURCES: World Food Programme; USDA; ERS estimates.

operations and ration shops and to double its commercial imports of wheat to about 200,000 tons in 1986/87 (July/June). To help reduce import needs, the wheat procurement price was raised 11 percent to 5,600 taka ($183) per ton in April 1987 in order to help raise government procurement and stocks. To meet distribution needs and stabilize prices, total wheat imports were increased 29 percent from less than 1.2 million tons in 1985/86 to 1.5 million tons in 1986/87, and stocks were drawn down to under 500,000 tons by July 1987, the lowest since 1983.

Wheat imports during 1986/87 included about 1.3 million tons of concessional supplies, in addition to commercial purchases. The United States, with 486,000 tons provided through the P.L. 480 program, was the major concessional supplier, followed by Canada and the World Food Program. All commercial purchases were made from the EC.

Also to help ease pressure on rising food grain prices, the Government increased imports of rice to 300,000 tons in 1986/87, compared with only 39,000 tons in the previous year. Despite a 16 percent increase in the rice procurement price to 9,755 taka ($318) per ton in April 1987, domestic procurement remained low and by June 1987 stocks fell to 219,000 tons, 38 percent below June 1986. Commercial purchases, mainly from Pakistan, accounted for about two--thirds of total rice imports and were up sharply from 1985/86. The United States and Japan were the only concessional suppliers.

Although total 1986/87 food grain imports, at 1.8 million tons, were up 50 percent from 1985/86, food grain stocks fell to 709,000 tons by June 1987, the lowest since 1983 and well below the food security target of about 1.25 million tons. Over three-quarters of food grain imports were provided concessionally, with the United States accounting for 39 percent of concessional supplies, compared with 24 percent in 1985/86. The U.S. share of commercial imports, however, fell from nearly 100 percent in 1984/85 and 1985/86 to zero in 1986/87.

Table 10--Food grain imports by Bangladesh by source and type of financing (July/June)

	Commercial			Concessional		
	1984/85	1985/86	1986/87	1984/85	1985/86	1986/87
	1,000 tons					
Wheat						
Australia	204	—	—	55	—	100
Canada	—	—	—	144	436	265
EC	—	—	200	130	70	70
France	—	—	—	28	—	14
UK	—	—	—	26	—	40
USA	513	104	—	373	264	486
W. Germany	—	—	—	20	20	20
WFP 1/	—	—	—	328	222	255
Other	—	—	—	77	48	50
Total	717	104	200	1,181	1,060	1,300
Rice						
Australia	—	—	—	—	—	—
Burma	60	10	10	—	—	—
Japan	—	—	—	33	24	45
Thailand	440	—	140	—	1	—
USA	—	—	—	87	—	63
Other	65	—	50	5	5	—
Total	565	10	200	125	29	108

-- = None or negligible.
1/ World Food Program imports from various donor sources.

SOURCES: Government of Bangladesh, USDA estimates.

Floods To Increase Food Grain Imports in 1987/88

Food grain production is forecast to decline 2 percent in 1987/88 to 16.2 million tons, assuming no major setbacks to the spring rice and wheat harvests in May 1988. Rice production is forecast at 14.8 million tons, down 4 percent, because flooding in late July damaged the summer and fall crops. However, strengthening rice prices should stimulate larger plantings of spring rice and increased input use. With normal weather, the spring rice crop should reach another record and prevent a more serious setback in total production. Wheat production in 1988 is projected to rebound to 1.4 million tons, with higher support prices and further improvements in input supplies helping to return production to its strong upward trend. However, the projected recovery in the spring 1988 wheat harvest depends on normal weather during November-April.

To stabilize food grain prices, the Government has increased distribution of subsidized wheat and rice and is currently forecast to increase food grain imports to nearly 3.1 million tons in 1987/88, up more than 70 percent from 1986/87. Imports are projected to include 2.4 million tons of wheat and 650,000 tons of rice, with about 70 percent provided on concessional terms. U.S. sales and donations are currently forecast at 1 million tons of wheat and 100,000-150,000 tons of rice, accounting for nearly half of concessional supplies and more than one-third of total food grain imports.

Larger imports are expected to help rebuild food grain stocks to about 1.1 million tons by the end of June 1988 and help restrain food grain prices. However, stocks will remain below the target of 1.25 million tons, the amount estimated to be necessary to protect against another production shortfall. Subsidized food grain distribution is expected to climb nearly 30 percent to 2.7 million tons, because of poor domestic supplies and reduced consumer purchasing power. In addition, food grain distribution to supplement government employees' income is likely to increase, reversing recent trends. These operations are expected to slow the rise in market food grain prices, but will sharply increase budgetary pressures.

Gains in Spring Food Grain Production Slowed by Policy Changes

Food grain production clearly remains highly vulnerable to the vagaries of the monsoon. However, Bangladesh's ability to compensate for poor weather has improved since the late 1970's because of a steady increase in the contribution of irrigated spring wheat and rice crops to total food grain production. Government programs that provided extension services, subsidized fertilizer, and seed to grow wheat on previously fallow land, as well as subsidized irrigation and fertilizer for rice growers, have contributed to this trend. However, the momentum in spring food grain production has been slowed in recent years by efforts to enhance economic efficiency and lower budgetary outlays through the reduction of subsidies. Sales of irrigation equipment have slumped, because of insufficient credit, still inadequate extension services, and relatively low output prices. Fertilizer use has hovered at 1.25 to 1.35 million tons, and area irrigated has leveled off at 2 million hectares because

of slowed investments, both reversing strong growth trends of the previous decade.

To regain the momentum in food grain production, particularly the spring rice and wheat crops, the Government is committed to a strategy that includes offering stronger price incentives, improving fertilizer supply and distribution, increasing dissemination of high-yielding seeds, and expanding area under irrigation, drainage, and flood control. Still, the summer and fall rice crops will continue to be subject to variable weather, traditional cropping methods, and competition with jute production.

India

1987/88 Kharif Harvests Severely Damaged by Drought

Total production of food grains, including wheat, rice, coarse grains, and pulses, will drop about 13 percent to 127 million tons in 1987/88, based on current assessments of drought damage to 1987 kharif (fall) harvests and probable reductions in the 1988 rabi (spring) harvests. Twenty-one of India's 35 meteorological subdivisions, including most food grain producing regions, had rainfall 20 percent or more below normal during the July–September monsoon period. The key wheat and rice surplus areas of Punjab, Haryana, and western Uttar Pradesh, along with the coarse grain areas of central, west, and south India that had been dry for the preceding 2 years, had rainfall 60 percent or more below normal. So far, the drought appears to be more widespread and severe than in 1979/80 when food grain production dropped nearly 17 percent. An equivalent loss is not expected in 1987/88, but the final outcome hinges on rainfall during November–March.

The 1987/88 rice crop is estimated at 48 million tons, down 20 percent from an estimated 60 million in 1986/87. Adequate rainfall in most of the eastern India "rice bowl" and increased irrigated area are expected to prevent production from dropping as low as in 1979/80, but the decline will be one of the largest on record. Substantial losses are expected in Punjab, Haryana, Uttar Pradesh, and Andhra Pradesh, where reduced river flows and falling ground water levels prevented irrigation facilities from fully compensating for the extremely hot, dry weather.

Production of coarse grain, a primarily rainfed crop also damaged by dry weather the last 2 years, is estimated to drop to about 23.3 million tons, 16 percent below 1986/87 and 31 percent below the 1983/84 record. Harvests of all major coarse grains—corn, millet, and sorghum—are estimated at the lowest levels since 1972/73. Production setbacks were concentrated in west and central India, where coarse grains are the principal subsistence crop and food staple. Forages and crop residues are the principal animal feeds in India, with only 6-8 percent of coarse grain output used as feed. However, consecutive poor coarse grain crops, together with drought damage to grazing land and forage supplies, have reportedly created an acute shortage of feedstuffs.

Outlook for Rabi Crops Poor

Prospects for 1987/88 wheat and pulse crops, planted primarily during November–December, are threatened by poor soil moisture and low supplies of surface and groundwater for irrigation. About 25 percent of wheat area and 10-15 percent of production is in exclusively rainfed areas that received little rainfall during July–October. The remaining 75 percent of wheat area and 85–90 percent of production are concentrated in western Uttar Pradesh, Punjab, Haryana, and northern Rajasthan on land protected by either surface or groundwater irrigation. Although information is not complete, reports indicate that supplies of surface water are below normal and groundwater availabilities are threatened in some areas because of low rainfall, abnormally heavy use, and shortages of power for pumping. Pulses are produced almost exclusively on rainfed land, and production is dispersed among seasons and regions. About 60 percent of all pulses are grown as a rabi crop, mostly in areas of northern India worst affected by the drought.

Rainfall during November-December will be critical to provide adequate soil moisture for planting rainfed wheat, as well as nearly all of the pulse crop. Irrigated wheat plantings are also likely to be reduced in the absence of October–November rains as

farmers adjust to the outlook for water shortages by reducing area and shifting to crops requiring less water--primarily pulses and coarse grains. Wheat yields, normally assured by irrigation, will be substantially more dependent than usual on unreliable winter rains. Supplies of fertilizer and other inputs are reported to be ample following low use on kharif crops and, after a 4 year decline in real wheat prices, the drought and adjustments in support prices are likely to boost growers' price expectations.

Because of dry planting conditions and the unreliable nature of winter rains in north India, it is probable that there will be a setback in the spring 1988 harvests of wheat and, particularly, pulses. Wheat production was an estimated 46 million tons in 1986/87, and has been forecast by some Indian Government sources at 43-45 million in 1987/88, implying only the fifth annual decline since 1965/66. Most of the losses are likely to be from area and yield declines in rainfed areas. The high historical resilience of wheat production to poor weather, particularly in irrigated states, suggests that a more serious decline is unlikely. Pulse production is projected to drop from an estimated 12.8 million tons in 1986/87 to 10.8 million, mostly on lower yields, as high prices and drought tolerance prevent a major drop in area planted.

Government Stocks Remain Above Target

Official stocks of wheat and rice were 23.3 million tons on July 1, 1987, down 4.8 million from July 1986. Wheat stocks accounted for most of the decline, falling 3.9 million tons to 14.9 million. The drop in wheat stocks was not consistent with estimated levels of procurement and offtake, and apparently resulted from abnormally large losses. Procurement of wheat in price support operations from the 1987 crop was about 9 million tons, down from the previous year because of post-harvest rains and stricter enforcement of quality standards. Offtake through the PDS and other distribution programs dropped to about 7.9 million tons in 1986/87, as ample open-market supplies reduced demand for government wheat. Procurement, offtake, and stock data for 1986/87, together with government-estimated exports of 438,000 tons, indicate that nearly 5 million tons were lost either in storage or to post-harvest rains. Field reports confirm that roughly 3 million tons of government-procured wheat were destroyed by heavy rains during the April-May 1987 procurement season.

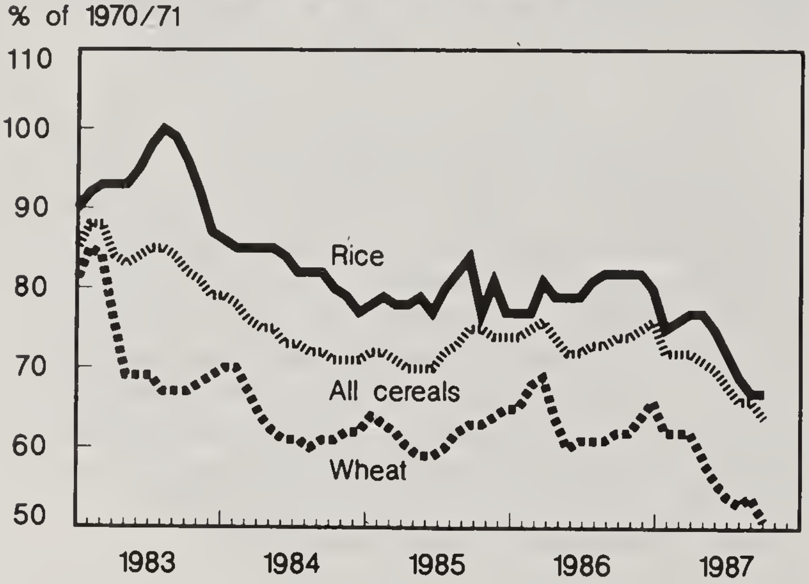
Rice stocks fell less than 1 million tons to 8.4 million during 1986/87, the result of lower procurement, record domestic distribution, and normal storage losses. Rice procurement was down primarily because of the 6 percent drop in 1986/87 production. Increases in rice allocations to the PDS partly compensated for smaller sales of wheat, and served to prevent a further increase in rice stocks. Government rice stocks had increased rapidly during 1982/83-1985/86, as gains in procurement exceeded growth in sales through the traditionally wheat-oriented PDS.

Official stocks in July 1987 remained above the food security target for July 1 of 21 million tons. The stock target is comprised of a 10-million-ton buffer to help meet production shortfalls, and 11 million in operational stocks to meet normal distribution needs. The buffer target of half wheat and half rice is the same throughout the year, but operational targets are seasonal and range from a maximum of 11 million tons in July to a low of about 6 million in April. Minimum acceptable stock levels are not specified. However, July 1 stocks, which would include the bulk of procurement from the 1988 wheat crop, of about 14 million tons, including roughly 10 million of wheat and 4 million of rice, would appear to be necessary to meet distribution needs until the next procurement season for each grain.

Import Needs Hinge on Rabi Outturn

The potential for wheat or rice imports because of the drought hinges on whether procurement losses and increased distribution needs reduce stocks--or projected stocks--below levels considered adequate to hold any price rises to acceptable levels. As in previous droughts, the Government will be unable to fully compensate for the drop in production and purchasing power with subsidized distribution of domestic and imported grain. However, food grain price stability is a fundamental policy priority, and the Government will probably import grain if price stability is substantially threatened.

India: Deflated Wholesale Price Indices for Rice, Wheat, and All Cereals



Data through September indicate that both wheat and rice prices have remained stable in real terms during 1987, continuing the trend of recent years.

Rice procurement is concentrated in Punjab (normally about 45 percent of all rice procurement), Andhra Pradesh (19 percent), Uttar Pradesh (11 percent), Haryana (9 percent), and Tamil Nadu (9 percent) during October--February. The drop in procurement in these states will probably not be as severe as the production decline because higher government levies on rice millers will increase the share of production that is procured. Rice procurement from the 1987/88 crop is forecast to drop to 6 million tons, with no data yet available for the October-December peak procurement period.

Wheat procurement occurs primarily in Punjab (nearly 60 percent of all wheat procurement), Uttar Pradesh (20 percent), and Haryana (18 percent), during April-May. Procurement is conducted in price support operations, not through levies, and depends on the size of the crop, the level of the procurement price, and the intensity of the procurement effort. The new wheat procurement price has been announced earlier than usual, and is up more than 4 percent to Rs. 1730 ($134) per ton, the largest increase in 5 years. Although highly dependent on the 1988 crop, 1987/88 wheat procurement is projected at about 9 million tons, based on the increased price and likelihood of an intensive procurement drive.

Government distribution of wheat and rice normally rises following production shortfalls, as more urban consumers draw more relatively low-priced grain from the PDS rather than the open market, and more grain is allocated for food-for-work and relief distribution in rural areas. Distribution in rural areas, principally of wheat, has expanded rapidly in an effort to better meet the needs of the rural poor. There has normally been considerable scope for substituting rice and wheat in the PDS, depending on availability of stocks. Distribution is projected to rise to a record of roughly 21 million tons in 1987/88, based on the current estimates of domestic supplies. Wheat, for which stocks are relatively high, is expected to account for all of the increase, with distribution projected at roughly 12 million tons. Adjustments in the composition of distribution are anticipated to hold rice distribution near the 1986/87 level.

The above forecasts of procurement and distribution, together with an assumption of average storage losses, indicate a decline in official stocks to about 15 million tons, including 4-5 million rice and 10-11 million wheat by July 1988. Projected stock levels are close to those that triggered imports in 1981 and could also trigger a decision to import in 1988. No imports of wheat or rice are currently anticipated, but close tracking of actual levels of procurement and distribution during the next 12–18 months will be necessary. As was the case following the 1979/80 drought, imports could be delayed substantially because of available stocks. The outlook for production and procurement of wheat in the spring of 1988 will be particularly important because of the essential role wheat is likely to play in meeting distribution needs.

Currently, the only impacts of the drought on food grain trade are expected to be larger imports of pulses, limitation of wheat exports to those already contracted and, possibly, imports of coarse grain. Imports of pulses, one of the only food items imported by private traders subject only to a tariff, have increased steadily in recent years, reaching roughly 300,000 tons in 1986. A recent reduction of the tariff, combined with rising internal prices, should boost imports in 1987 and 1988, subject to limited world market supplies.

Table 11--Summary of government wheat and rice operations in India (July/June)

Item	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87 est.	1987/88 for.
					1,000 tons				
Wheat									
Opening stocks	11,687	8,822	7,732	10,150	13,611	17,945	20,739	18,851	14,930
Procurement	5,860	6,595	7,718	8,292	9,300	10,347	10,532	9,000	9,000
Imports	0	49	2,114	1,952	3,739	690	0	0	0
Exports	641	58	0	104	24	32	337	438	500
Public distribution	8,974	6,839	6,876	8,009	6,971	6,944	11,101	7,851	12,000
Ending Stocks	9,003	7,733	10,181	13,013	17,813	20,739	18,851	14,930	10,500
Rice									
Opening stocks	9,605	7,089	5,847	5,120	3,840	4,594	7,758	9,260	8,400
Procurement	3,851	5,609	7,334	7,047	7,731	9,863	9,835	9,000	6,000
Imports	0	0	78	0	466	381	10	0	0
Exports	397	165	333	361	0	0	0	0	0
Public distribution	5,585	5,645	7,067	7,978	7,258	6,600	7,688	9,039	9,000
Ending Stocks	7,090	5,839	5,119	3,781	4,621	7,758	9,260	8,400	4,700
Total									
Opening stocks	21,292	15,911	13,579	15,270	17,451	22,539	28,497	28,111	23,330
Procurement	9,711	12,204	15,052	15,339	17,031	20,210	20,367	18,000	15,000
Imports	0	49	2,192	1,952	4,205	1,071	10	0	0
Exports	1,038	223	333	465	24	32	337	438	500
Public distribution	14,559	12,484	13,943	15,987	14,229	13,544	18,789	16,890	21,000
Ending stocks	16,093	13,572	15,300	16,794	22,434	28,497	28,111	23,330	15,200

Notes: 1. Annual supply and use data do not balance becuse of losses and reporting lags.
2. Public distribution includes allocations to flour mills and food-for-work programs.

Sources: Ministry of Food and Civil Supplies, Government of India; ERS estimates.

Relatively small amounts of wheat have been exported from official stocks over the last several years to help reduce stocks. Exports totaled about 337,000 tons in 1985/86 and 438,000 in 1986/87. Recent export commitments include 350,000 tons to Iran and additional quantities to Nepal, Jordan, and North Korea. Actual shipments during 1987/88 are forecast at about 300,000 tons, and the Government has indicated that no further export commitments will be made.

In September, the Government announced that it would lift its ban on coarse grain imports and allow up to 1 million tons of corn and, possibly, sorghum to be imported through official channels in 1987/88. The announcement was probably partially intended to discourage domestic hoarding, and imports at that level are unlikely. However, it is likely that some imports will occur because of reported feed shortages, and particularly because corn and sorghum are preferred foods in some drought-hit areas and government stocks are negligible.

Some Policy Adjustments Likely Following Drought

The drought is not expected to result in any fundamental changes in food grain sector policies. Developments that have been announced or can be expected include controls on private grain traders, further emphasis on targeted and rural distribution programs, more public investment to improve rainfed production technology, and in the near term, strengthened price incentives to help ensure a rapid production recovery.

The accumulation of a food grain surplus since 1983/84 allowed relaxation of a number of restrictions on domestic food grain trading. These measures include movement and

stockholding limitations on private traders, higher procurement levies on rice millers, and controls on wheat use by modern bakeries. These restrictions have been reimposed and will help maximize procurement of wheat and rice for use in distribution channels. The surplus also provided the opportunity to develop and expand distribution programs aimed at the rural poor who have not benefited directly from the urban-oriented PDS. Futher expansion of these rural programs is expected to aid drought victims. The generally higher unit subsidies involved in these programs will likely offset reduced storage costs and raise budgetary outlays on food grain operations.

The 1987 drought has demonstrated that, despite the "drought-proofing" afforded by irrigation, farm production and rural welfare are still heavily dependent on rainfed agriculture. Although development plans have recently tended to place more emphasis on rainfed agriculture, actual budget allocations and performance in development and use of improved technology have been disappointing. It is likely this drought will lead to an increased financial commitment by planners and, perhaps, donors to find and introduce effective technologies.

In 1983/84 Indian food grain production rebounded from a weather induced setback in 1982/83 to shatter the previous record by more than 14 percent. That recovery demonstrated the resilience of the sector, as well as its ability to respond to strengthened output price signals and ample input supplies provided in the early 1980's. Since 1983/84, price signals from both the open market and price supports have been weakened, and weather has also played a role in preventing further gains in food grain production. Faced with prospects for dwindling cereal stocks, a large surplus of fertilizer because of drought-slowed growth in use, and a tight balance of payments picture, the Government may opt to again boost producer incentives over the next several years to stimulate a recovery.

Nepal

Food Grain Production Drops in 1986/87

Food grains occupy most of the cultivated land in Nepal. Rice is the most important food grain; it is grown in the Tarai (plains) and on terraced land in the mountains. One or two crops are grown between June and November. Rice receives more irrigation than other crops, but production is still very dependent on rainfall. Maize is the staple in the mountains. Planted in the summer, it is the most important crop grown on sloping land. Wheat is the major winter cereal. It is usually grown after rice, on residual moisture or with irrigation.

The 1986/87 crops suffered from poor distribution of rainfall, with serious droughts in the eastern and western Tarai and flooding in the western hills. Rice was hit hardest by the drought in the eastern Tarai, dropping total production almost 14 percent to 1.6 million tons. The corn crop reached a near-record 868,000 tons, as heavy rains in parts of the western hills caused only limited damage. Corn area was the highest ever, as hill farmers continued to expand plantings on steep slopes despite declining yields. Increased wheat plantings in response to the rice setback resulted in an increase in output to 686,000 tons, based on record area and yield.

In response to the Government's requests for food assistance, pledges were received for about 45,000 tons of food grain to be delivered during the 1986/87 July/June marketing year. As of August, 1987, however, only about 10,000 tons had arrived. Nepal's landlocked position, limited transportation network, and mountainous terrain often complicate the logistics of food aid.

No Improvement Expected in 1987/88

This year's rice and corn crops were affected by prolonged dry weather which lasted until August. Subsequently, torrential rains fell in the central and eastern parts of the kingdom, damaging cropland as well as trails and bridges. As a result, food grain production is likely to remain unchanged in 1987/88. Rice production is likely to hold at 1.6 million tons, and the corn crop will be about 870,000 tons. The wheat crop is just being planted, and output could remain in the normal range if the unusual pattern of rainfall results in sufficient residual moisture for germination and growth. If in addition farmers plant more wheat, or apply more inputs to compensate for below-normal rice output, wheat production might match its

record of about 690,000 tons. Despite below trend production, however, neither concessional nor commercial imports are likely in any significant quantity. Logistical and administrative problems apparently hamper potential donors, and Nepal lacks the foreign exchange to import commercially.

The Government has tried to improve the long-run food situation in several ways. It has eliminated consumer food subsidies that used to go to residents of the capital. In addition fertilizer distribution has been largely privatized in the hope that fertilizer will be more available to farmers at the times and places and in the quantities needed. The Government is also moving to improve the quality of seed and the relevance of agricultural research.

Pakistan

Food Grain Production Drops in 1986/87

A 12-percent decline in wheat production more than offset increases in rice and coarse grain output, resulting in a 5.3-percent drop in total cereal production in 1986/87. Output fell to 17.5 million tons from the previous year's record of 18.4 million. The 1986/87 wheat crop, harvested in the spring of 1987, is estimated at 12.2 million tons, down from the record 13.9 million tons the previous year. Harvested area increased slightly, but the yield was depressed by shortages of phosphatic fertilizer at planting, drought conditions during flowering, and heavy rains at harvest.

Rice production jumped more than 20 percent from the previous year's poor showing, to a record 3.5 million tons in 1986/87. Favorable weather throughout the growing season, increased use of fertilizer, and low incidence of pests contributed to the major improvement in output. About 60 percent of the additional production can be attributed to an increase in area harvested and about 40 percent to an increase in yield. Coarse grain production was up almost 10 percent to 1.7 million tons.

Wheat Stocks and Rice Exports Remain High

Due to the record 1985/86 wheat crop, Pakistan imported no wheat commercially in 1986/87. After reaching 1.8 million tons in 1985/86 (July/June), imports returned to a "normal" level. The Afghan Refugee Relief Program, operated by the World Food Program, accounted for all 370,000 tons of imports. The record crop left the Government with stocks of about 3.9 million tons, compared with 2.8 million tons a year earlier. To this burdensome quantity will now likely be added the problem of high-moisture new stocks as a result of harvest-time weather problems in spring 1987.

Record rice production in 1986/87 kept marketing year (October/September) rice exports at about 1.3 million tons, the same as 1985/86, despite low beginning stocks. The Rice Export Corporation procured 1.3 million tons, including more than 200,000 tons of basmati rice. The aromatic basmati rice is exported primarily to Gulf countries at a premium price, currently fixed at $750 per ton. By August over 100,000 tons had been shipped. Pakistan's largest customers for coarse rice have been Iran, Bangladesh, and the Ivory Coast, each of which has imported more than 150,000 tons this year. Sri Lanka, Senegal, and other African countries are also consistent buyers. Pakistan's rice stocks increased somewhat from a revised level of about 632,000 tons in 1985/86 to about 700,000 tons in 1986/87.

Smaller 1987/88 Rice Crop Estimated

Production of both rice and coarse grains is projected to fall in 1987/88, partly due to the prolonged drought in June and July in the Punjab. Input supplies, however, were considered good, and the dry weather kept pest incidence low. Some of the area in the Punjab normally devoted to rice was reportedly planted to sugarcane because of its higher drought resistance. In addition there was a substantial shift from IRRI (modern) varieties to lower-yielding basmati rice, due to a significant increase in the procurement price and the introduction of a higher-yielding variety of basmati, PK-385. The drop in area planted to IRRI varieties compared with basmati varieties in the Punjab is expected to contribute to a lower average yield for the 1987/88 rice crop.

Rice area and production are forecast to remain nearly unchanged in the Sind, which last year accounted for as much rice production as the Punjab, but which this year

will take the lead. Pakistan's total rice area is likely to fall from over 2 million hectares to under 1.8 million hectares. Production in 1987/88 is currently estimated at 3.1 million tons, down 12 percent from the previous year's record. Coarse grain production is estimated at 1.6 million tons, down more than 8 percent on lower yields. Total Pakistani rice exports during 1987/88 (July/June) are likely to reach about 1.1 million tons. The decrease from last year is due to the production shortfall, but adequate stocks and rising world prices should prevent a larger decline in exports.

Outlook Optimistic for 1988 Wheat Crop

The Government has set a wheat production target of 15 million tons in 1987/88. It will be difficult to achieve this target unless both area and yield transcend the plateaus at which they had more or less settled in recent years. However, the record yield of 1986 may be an optimistic sign: it may be due in part to earlier planting and better field preparation, resulting from the widespread use of the early cotton variety NIAB-78 in cotton-wheat rotations. Late planting has been a major constraint on wheat yields in the Punjab, the major producing area. The crop is currently forecast at 14.5 million tons, assuming earlier planting and adequate supplies of irrigation water. The bulk of the crop is grown on irrigated land, and, in contrast to northern India, there are no indications of irrigation water shortages.

Despite high stocks, wheat exports are not expected in 1987/88. Pakistan's asking price of $150 per ton was not competitive when undamaged grain was involved; the possibility of high-moisture or shriveled grain will only exacerbate the problem. Moreover, the Government is not likely to subsidize wheat exports so soon after removing its domestic subsidy on consumption. The large stocks will again limit imports to about 370,000 tons through the Afghan Relief Program in 1987/88, but U.S. shipments are forecast to be up to about 330,000 tons.

Gradual Deregulation of Food Grain Sector Continues

Agricultural policy in Pakistan has typically placed great importance on achieving wheat self-sufficiency. Declining world wheat prices are not expected to diminish efforts to sustain self-sufficiency. Moreover, wheat yields in Pakistan remain below both international standards and those achieved by progressive farmers within the country, so there is scope for increasing productivity through improvements in extension, water management, and input supplies. Following the increase in 1987/88, the producer support price for wheat is now about $120 per ton.

For 44 years the Government of Pakistan operated a wheat rationing system. In April 1987 this system was abolished, as part of an overall deregulatory thrust. The Government will continue to play an important, but diminished, role in domestic wheat marketing. It has targeted tribal and remote areas for continued subsidized distribution. There will also be a small subsidy included in the price at which the Government releases its wheat stocks in the open market, but flour prices will not be controlled. In the current marketing year, although procurement will decline due to the Government's reduced role, offtake is likely to increase as excessive stocks are drawn down. Nevertheless, the Government will likely not export wheat, and will continue to hold more stocks than it otherwise would during the changeover period to assure the population of an adequate supply and stable prices.

Despite the importance of rice export earnings to the economy, expansion of rice production and exports in general has not been a top priority in recent years because rice is not an important domestic food staple, and because of the thin and highly competitive world market. However, the sale of basmati rice abroad is highly profitable, and the Government has encouraged its production by raising the support price 27 percent to about $375 per ton for 1987/88 and by releasing a high-yielding variety. With Pakistan's support prices for coarse rice creeping up annually and world prices generally declining, coarse rice exports have been a break even or losing proposition. However, if world rice prices strengthen, the Government may opt to provide more incentives to boost production and exports of coarse rice. The Government has recently announced that the private sector will be allowed to export rice, but package-size and duty restrictions may severely limit the amount of such trade.

Sri Lanka

Rice Imports Grow in 1986

During 1986, Sri Lanka's rice production declined to 1.8 million tons, 2.4 percent below the record 1985 harvest. The decline stemmed from losses in area harvested, with average yields actually showing a slight increase. Floods damaged the February/March-harvested Maha crop, which accounts for about two-thirds of output, while drought reduced the July/August-harvested Yala crop. The widespread use of high-yielding varieties, estimated to cover 70 percent of rice land, and a 12-percent increase in fertilizer use helped compensate for poor weather and other disrupting factors, including nearly 4 years of civil war and a break in the Kantile Dam.

Imports of low-quality rice, mainly to build stocks, reached 220,000 tons in calendar 1986, compared with 195,000 in 1985. Despite liberalization measures throughout most of the Sri Lankan economy, the food grain sector remains heavily controlled. To limit rice imports, private traders are assessed an import duty of 25 percent, causing the Government to be the sole importer. The main suppliers were Pakistan, Burma, and Thailand. Only negligible quantities of U.S. rice were imported. By the end of 1986, stocks had increased to a more comfortable level of 300,000 tons.

Wheat is not produced in Sri Lanka, but is the main food grain imported. Wheat is imported and distributed by the Government through a network of consumer cooperatives, with the sale profits helping to defray the costs of the rice and sugar subsidy programs. Total wheat imports fell about 8 percent to 593,000 tons in 1985/86 (July/June), but increased 16 percent to 665,000 tons during calendar year 1986. The United States captured half of the import market in 1986, with Saudi Arabia, Australia, Canada, Argentina, and the EC the other major suppliers. The U.S. share was nearly twice that of 1985, because of an advanced allocation of wheat from the fiscal 1987 P.L.-480 wheat allocation, and because of sales through the Export Enhancement Program (EEP). Concessional sales accounted for over three-quarters of U.S. wheat shipments to Sri Lanka, and nearly 60 percent of Sri Lanka's total wheat imports. Wheat stocks, at 91,000 tons by December 1986, were near the buffer stock target and up from 79,000 tons in 1985.

Drought Reduces Rice Production and Stocks in 1987

Rice production dropped 15 percent to an estimated 1.5 million tons in 1987 because of drought and flood damage. Prolonged drought led to heavy losses to the Maha rice crop, while the Yala crop was damaged by both the drought and heavy flooding in August 1987.

Despite the production shortfall, ample stocks allowed rice imports to be reduced to about 120,000 tons in calendar 1987, down 45

Table 12--Wheat imports by Sri Lanka by source and type of financing (calendar year)

	Commercial				Concessional			
	1984	1985	1986	1987 est.	1984	1985	1986	1987 est.
	1,000 tons							
Wheat								
Argentina	31	52	53	53	--	--	--	--
Australia	13	289	72	--	40	--	6	5
Canada	87	--	--	--	86	36	72	54
EC	--	52	--	--	60	40	40	55
United States	89	--	79	135	166	196	275	223
Other	--	--	84	150	--	--	--	--
Total	220	393	288	338	352	272	393	337

-- = None or negligible.

SOURCE: Government of Sri Lanka.

percent from 1986. Pakistan, Thailand, and Burma remained the principal suppliers. With the decline in both production and imports, stocks fell sharply to an estimated 70,000 tons by December 1987, the lowest since 1986.

Wheat imports also fell in 1986/87 to an estimated 555,000 tons, although calendar year purchases in 1987 are expected to hold steady at about 675,000 tons. U.S. wheat is expected to hold a 50 percent share of the market, despite competition from Australia and Saudi Arabia, with all U.S. sales occurring through the P.L. 480 and EEP programs. Ending stocks are estimated at about 122,000 tons in December 1987, up slightly from the previous year and high by historical standards.

Higher Imports Likely in 1987/88

Production losses and sharply reduced rice stocks in 1987 are likely to boost food grain imports in 1987/88. Rice imports are projected to rise to about 150,000 tons in 1988 to help offset some of the production shortfall, replenish stocks, and prevent an politically undesirable rise in domestic rice prices. While traditional suppliers in the region are likely to meet most of the import needs, the outlook for higher world rice prices and Sri Lanka's tight balance-of-payments position could lead to some concessional supplies from non-traditional suppliers.

Wheat imports are also forecast to rise substantially in 1987/88, as high world rice prices lead to some substitution of wheat for rice in commercial purchases, and donors provide larger amounts on concessional terms. Wheat imports are forecast to rise to 700,000 tons in 1987/88, the highest since 1979/80.

OILSEED SECTOR DEVELOPMENTS AND OUTLOOK

Overview

Record Oil Imports, U.S. Shipments in 1987/88

Oilseed production is expected to be down in most of South Asia in 1987/88 because of the effects of drought. India's output is likely to be down 8 percent as drought has cut the harvest of its major crop, peanuts, by 26 percent. However, the final oilseed total

Table 13--Production of selected oilseeds in South Asia 1/

Country	1984/85	1985/86	1986/87 est.	1987/88 proj.
	1,000 tons			
Bangladesh				
Peanuts	21	22	22	24
Rapeseed	140	133	120	140
Total	161	155	142	164
India				
Copra	360	380	320	300
Cottonseed	3,447	3,652	3,218	3,350
Flaxseed	389	373	400	400
Peanuts	6,436	5,547	5,900	4,350
Nigerseed	148	190	175	120
Rapeseed	3,073	2,639	2,800	2,900
Safflower	515	321	400	450
Sesame	521	496	500	450
Soybean	955	982	900	1,000
Sunflowerseed	440	301	450	475
Total	16,284	14,881	15,063	13,795
Pakistan				
Cottonseed	2,014	2,468	2,638	2,518
Peanuts	69	63	75	65
Rapeseed	234	250	245	248
Sunflower	18	27	32	40
Total	2,335	2,808	2,990	2,871
Sri Lanka				
Copra	240	232	100	150

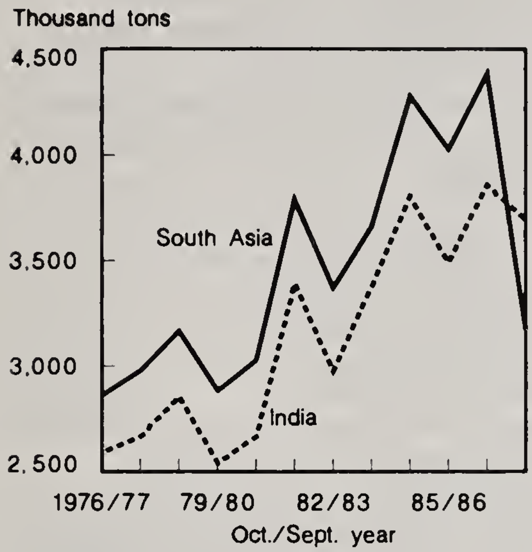
1/ Production reported by local July/June crop years, except Sri Lanka where production is for January-December of the first year.

SOURCES: Official government data in each country, USDA estimates.

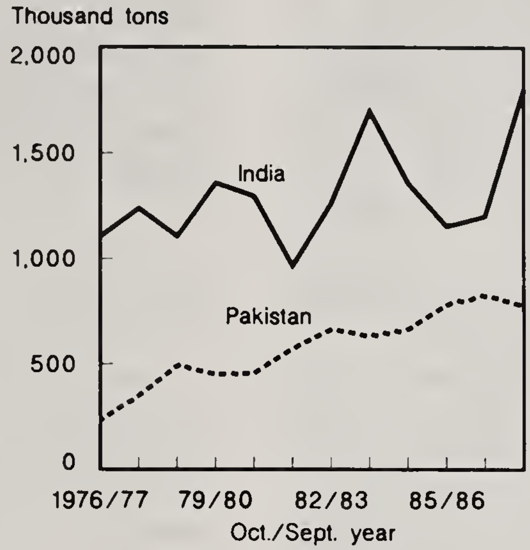
depends on winter (rabi) production, which is mostly rapeseed. Pakistan's oilseed production is estimated to be off slightly from last year's record because of a smaller cotton crop. In Bangladesh, production is estimated to have recovered, while continued dry weather in Sri Lanka is expected to lead to only a partial recovery in copra production from the poor 1986/87 crop.

The region's vegetable oil imports are likely to set a record in 1987/88, as the major importers take record or near-record levels. India's imports are projected to rise 11 percent to match the previous record of 1.7 million tons; most of the increase is expected to come in rapeseed oil. Domestic oilseed and oil prices are now about three times world prices, as a result of both the drought induced shortfall in domestic supplies and the Government's policies of encouraging oilseed production and curtailing consumption. The Government of India has also announced a

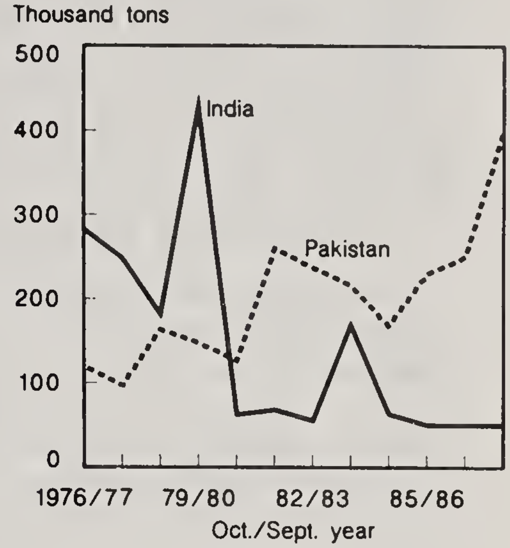
Production



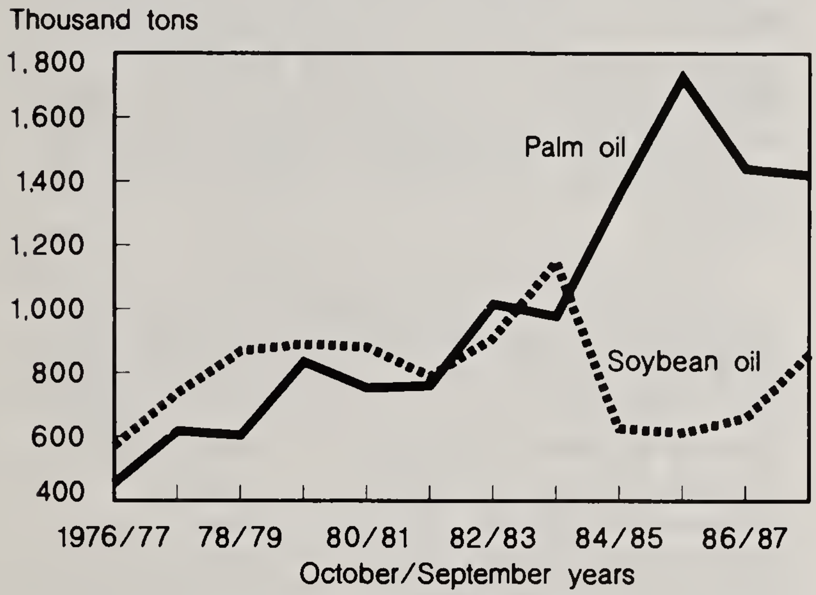
Imports



U.S. Soybean Oil Exports



South Asian Palm and Soybean Oil Imports



one time-only permission to import oilseeds, but it is unclear whether significant amounts will be imported. Pakistan's imports are forecast to recover by 28 percent to 775,000 tons, primarily because of anticipated shipments of U.S. soybean oil that were delayed from 1986/87. Oil imports by Bangladesh are expected to fall because of high stocks and a foreign exchange squeeze.

Although soybean oil is likely to regain a dominant share of Pakistan's oil imports in 1987/88 for the first time since 1982/83, palm oil is projected to maintain its dominant market share in other countries, and in the region as a whole. Pakistan's soybean oil imports are projected to rise to a record 400,000 tons, with U.S. oil provided through the P.L.-480 and GSM 102 programs meeting all or most import demand. No gains are currently forecast in soybean oil imports elsewhere in the region because of competition from palm and rapeseed oils, but increased price competitiveness could boost the U.S. share of the India market. The region's total soybean oil imports are projected to rise more than 30 percent to 860,000 tons, while U.S. sales more than double to 495,000 tons - the highest since 1979/80.

South Asian palm oil imports are projected to remain near 1.4 million tons, or 50 percent of total regional edible oil imports, primarily because of the outlook for record Indian purchases to meet the expanding needs of its public distribution system (PDS). India's imports of relatively low-priced palm oil are projected at 900,000 tons, more than 50 percent of its total imports, and palm oil is expected to maintain a majority share of the Bangladesh and Sri Lankan markets. Larger purchases of rapeseed oil are also projected for 1987/88, primarily by India, as increasing Canadian and European supplies make rapeseed oil increasingly price competitive with palm and soybean oils. Regional rapeseed oil imports, all by India, are projected to rise to a record of 475,000 tons, or 16 percent of total imports, in 1987/88.

Regional Oil Imports Steady in 1986/87

Regional oilseed production was also mixed in 1986/87. India's output recovered

only marginally from a poor 1985/86 crop, primarily because of continued dry weather in peanut and rapeseed areas. Pakistan had record output on the strength of a record cotton crop, up nearly 7 percent with ideal weather and further adoption of high-yielding new varieties. Oilseed production plunged nearly 60 percent in Sri Lanka because of damage to the coconut crop, and fell 8 percent to a 10-year low in Bangladesh.

Vegetable oil imports into South Asia fell marginally in 1986/87, as a sharp drop in Pakistan's imports offset a healthy increase in India's. Pakistan's imports dropped 40 percent from the record 1 million tons in 1985/86, because of large stocks and record domestic production. Pakistan's imports of palm oil fell 48 percent, and imports of soybean oil fell nearly 40 percent, because excessive stocks led to postponement of shipments of U.S. soybean oil under 1986/87 program allocations.

India's oil imports in 1986/87 rose to 1.5 million tons, as a second poor crop caused record sales of cooking oil through the PDS, as well as heavy buying late in the marketing year to build stocks. Palm oil for use in the PDS continued to dominate Indian purchases with a 57-percent market share, but imports of soybean and rapeseed oil also increased. Rapeseed oil imports doubled to about 300,000 tons because of highly competitive prices. U.S. soybean oil continued to account for a small share of India's soybean oil purchases, with 1986/87 U.S. exports reaching 47,098 tons through EEP and P.L. 480, Title II. India's closing stocks of edible oils reached a record 400,000 tons due to heavy late-season purchases.

Palm oil remained the major imported vegetable oil in South Asia in 1986/87 with imports of 1.44 million tons and a 58-percent market share. However, both imports and market share were down substantially from the records of 1.74 million tons and 69 percent achieved in 1985/86. Most of the market share lost by palm oil was taken by competitively priced supplies of European and Canadian rapeseed oil, and regional imports of rapeseed oil more than doubled to a record 340,000 tons --a 14 percent market share. South Asian soybean oil imports increased about 6 percent to 660,000 tons in 1986/87, for a 27-percent market share. However, U.S. soybean oil exports to the region were off 30 percent to 231,302 tons, the lowest since 1980/81. U.S. soybean oil sales were hampered by a continued lack of price-competitiveness with competing oils and suppliers, and the postponement of program shipments to Pakistan.

Bangladesh

Oilseed Output Drops in 1986/87

Wet planting conditions in October/November 1986 lowered area planted to oilseeds, mainly rapeseed, in 1986/87. Yields also fell, dropping oilseed production 8 percent to 154,000 tons, the lowest level in a decade. A fourfold increase in oilseed imports to 50,000 tons enabled 1986/87 edible oil supplies to increase 13 percent to 63,000 tons. Vegetable oil imports increased slightly to 300,000 tons, stocks of imported oils were maintained at high levels, and domestic disappearance rose 7 percent to 330,000 tons. However, per capita disappearance, at about 3.5 kilograms, is among the lowest in the world.

In July 1986, the import tariffs on vegetable oil were increased. The tariffs on palm and refined soybean oils were increased more than those on crude soybean oil, making imports of crude soybean oil for local refining more profitable than imports of refined soybean or palm oil. This policy was implemented to encourage greater use of domestic refining capacity. Crude palm oil is not imported because it deteriorates rapidly, and because of Malaysia's high export duty on crude palm oil. As a result of the tariffs, 1986/87 (October/September) soybean oil imports reached an estimated record of 90,000 tons and increased their market share from 17 percent in 1985/86 to 33 percent. Meanwhile, palm oil imports fell 18 percent to 180,000 tons, lowering palm oil's share of total imports from 75 percent in 1985/86 to 60 percent in 1986/87. The U.S. share of Bangladesh's soybean oil imports rose from roughly 28 percent to 37 percent in 1986/87 because of P.L. 480 sales. Other major suppliers of vegetable oil to Bangladesh include Argentina and the EC.

Oilseed Recovery in 1987/88
Likely To Cap Imports

With a return of normal winter weather, oilseed production is forecast to recover to 177,000 tons in 1987/88. Rapeseed production, which accounts for about 80 percent of total oilseed output, is forecast to increase 17 percent to 140,000 tons. Although the Government's diversification program has targeted rapeseed production and calls for greater use of fertilizer and other inputs, the program is expected to bring only modest improvement to rapeseed yields in the near term.

Oil imports are estimated to fall 13 percent to 260,000 tons in 1987/88. The current tariff system and continued availability of U.S. concessional supplies are expected to continue to increase crude soybean oil's share of Bangladesh's imports, at the expense of refined oils, especially palm oil. The tariffs have resulted in a $330-per-ton increase in total import charges on refined soybean oil and close to $200 per ton on palm olein. The domestic soybean oil refining industry is now running near capacity, hence a continuation of the current tariff policy could lead to new plant construction. Vegetable oil stocks are expected to decline, but to remain high as a proportion of imports and consumption.

India

Drought Leads to Another
Poor Oilseed Crop in 1987/88

Oilseed production is expected to drop about 8 percent in 1987/88 because of losses in key peanut-producing areas of west and south India that were among the worst affected by the drought. Production of peanuts, the major oilseed, was hampered by bad weather the previous 2 years and is expected to drop an additional 26 percent to about 4.35 million tons--the smallest crop since 1972/73. The kharif (fall-harvested) peanut crop that normally accounts for about 70 percent of production is estimated to be one of the lowest on record. The kharif peanut crop was a near total loss in the major producing state of Gujarat, and there were also substantial losses in Karnataka, Andhra Pradesh, and Tamil Nadu.

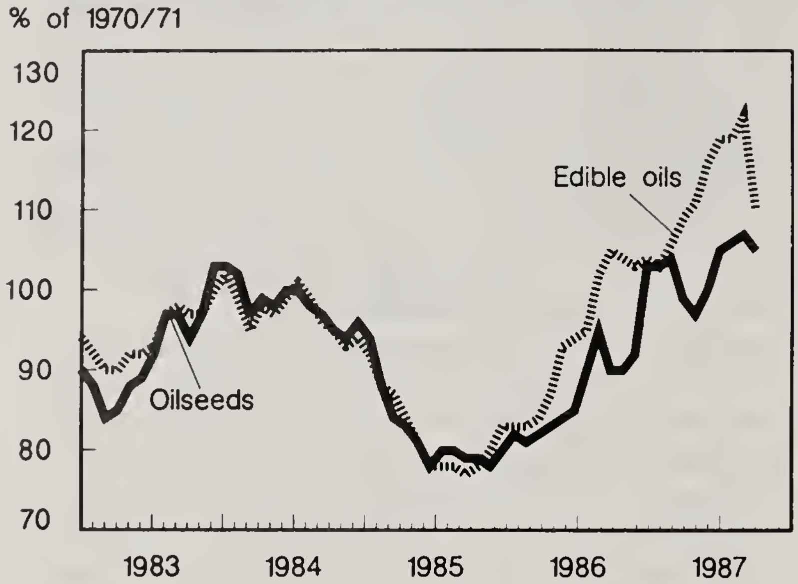
Other kharif oilseed crops appear not to have been as seriously damaged, and small increases are expected in cottonseed, soybean, and sunflower production. Soybean production, concentrated in western Madhya Pradesh, is estimated at 1 million tons, a modest recovery from the poor 1986/87 crop. Good planting rains, strong producer price incentives, and near-normal rainfall during the growing season helped the soybean crop. Sunflower production appears to have maintained its upward trend, benefiting from adequate rain in south central growing areas, high prices, and its adaptability and increased use as a contingency crop. Production of cottonseed is currently expected to rebound modestly from a decline in 1986/87 because of irrigation and strengthened price incentives for cotton producers.

The severity of the decline in total oilseed output in 1987/88 will depend significantly on the now uncertain outlook for rabi oilseed crops, principally rapeseed. Rapeseed production is concentrated on rainfed land in the northern states of Uttar Pradesh, Rajasthan, Haryana, Madhya Pradesh, and Gujarat. Soil moisture conditions in most of these areas were poor during October when plantings normally begin, and both area and yield will depend heavily on November-December rains. The 1987/88 rapeseed crop is currently projected at 2.9 million tons, up marginally from 1986/87 because of beneficial October showers, unprecedented producer price incentives, and intensive promotion efforts. Despite similar price incentives and promotion measures, the rabi peanut crop, normally accounting for about 30 percent of peanut production, is expected to be down in 1987/88. Poor supplies of irrigation water are expected to reduce plantings and yields.

Consecutive Poor Crops
Boost Oilseed Prices

Oilseed harvests were also affected by dry weather, particularly in peanut growing areas, during the last 2 years. Total output fell 9 percent from the 1984/85 record in 1985/86, and recovered only marginally in 1986/87. Dry weather in peanut-growing areas of Gujarat and in rapeseed-growing areas of north India was a major constraint in both years. Another factor may have been the

India: Deflated Wholesale Price Indices for Oilseeds and Edible Oils



sharp decline, in real terms, in domestic oilseed prices that occurred following abnormally large edible oil imports in 1983/84. Record domestic production and imports in that year led to an abrupt drop in oilseed prices during the 1984/85 harvest and 1985/86 planting season, reversing a relatively stable upward trend in producer incentives that had held since 1977/78.

Consecutive poor harvests, together with a major setback in 1987/88, have now led to a sharp recovery in prices. Domestic prices of most oilseeds and oils are well above previous records and roughly triple comparable world prices. Oilseed prices have increased markedly relative to competing crops, including coarse grains and pulses, and should provide strong incentives to plant oilseeds if moisture conditions and seed supplies are adequate.

The rebound in oilseed prices, though clearly fueled by the drought, appears to have been partly the result of policy decisions intended to restore high oilseed producer incentives. Policy adjustments during 1986/87, including reduced distribution of imported oils and increases in issue prices of imported oils and support prices for oilseeds, suggest that the Government intends to resume use of the price mechanism to manage demand and enhance domestic supply.

Low Production and Rising Prices Boost 1986/87 Oil Imports

After dropping 10 percent in 1985/86, domestic vegetable oil production recovered only about 3 percent in 1986/87. Although edible oil was imported at a relatively slow pace early in 1986/87 (October/September), a sharp rise in prices during the summer as the drought worsened, caused imports to quicken to a record pace during June-October. Imports during 1986/87 are estimated at 1.54 million tons, compared with 1.18 million in 1985/86, the smallest in 4 years. Purchases were heavily skewed towards the last half of the marketing year, with a record of roughly 330,000 tons imported in September 1987. Because of record late season purchases, ending stocks of imported oils with the State Trading Corporation, the dominant importer, were estimated at a record 400,000 tons--nearly half palm oil.

Allocations of imported oils to the public distribution system (PDS) and the vanaspati (hydrogenated oil) industry, which had been reduced to near record lows early in the marketing year to curb import demand and strengthen prices, were raised to record highs by year's end to halt the rise in domestic prices. The PDS remained the major channel for imported oil in 1986/87, with large increases in monthly allocations during July-September resulting in record PDS sales of roughly 820,000 tons--about 100,000 above the previous record. PDS allocations normally are increased to meet peak seasonal and festival demand during August-October, but the 200,000 ton monthly allocations for September and October were unprecedented.

Early in the 1986/87 marketing year, allocations of imported oil to the vanaspati industry were slashed to 10 percent of the industry's requirements--the lowest since the mid-1970's--to force substitution of domestic oils. Allocations were gradually increased during the year, as they normally are, reaching 85 percent of requirements--the highest in recent years--by September-October 1987. Use of imported oils in vanaspati during 1986/87 is estimated at 520,000 tons--about 53 percent of the industry's total use--up marginally from the previous year.

With the large increases in both PDS and vanaspati allocations, total monthly offtake of imported oil reached an unprecedented level of about 380,000 tons and halted the rise in domestic prices by September. However, while the Government clearly indicated its

Table 14--Supply and distribution of vegetable oils in India (October/September)

Item	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87 est.	1987/88 for.
	1,000 tons								
PRODUCTION									
Coconut	210	207	230	213	189	226	236	198	186
Cottonseed	226	228	251	269	242	316	331	286	304
Groundnut	1,339	1,177	1,615	1,281	1,608	1,520	1,320	1,366	1,014
Linseed	78	116	140	108	128	146	108	116	116
Nigerseed	30	41	46	34	53	44	44	47	32
Rapeseed	431	601	714	662	683	955	856	833	960
Safflower	60	72	90	85	107	110	69	86	96
Sesame	102	135	179	168	169	158	150	151	134
Soybean	55	69	73	76	95	149	154	139	173
Sunflower	11	22	54	78	102	151	102	152	159
Total	2,542	2,668	3,392	2,974	3,376	3,775	3,370	3,374	3,174
IMPORTS									
Coconut	0	71	14	10	10	0	0	0	0
Cottonseed	0	28	0	0	0	0	0	0	0
Palm	595	431	410	597	557	728	798	880	900
Rapeseed	123	124	78	115	268	229	150	300	450
Soybean	628	639	460	537	808	398	250	360	360
Sunflower	10	0	0	0	54	0	0	0	0
Total	1,356	1,293	962	1,259	1,697	1,355	1,198	1,540	1,710
EXPORTS	0	0	0	0	0	0	0	0	0
DOMESTIC DISAPPEARANCE	3,908	3,981	4,434	4,163	4,833	5,160	4,638	4,804	4,884
STC ENDING STOCKS									
Palm	30	30	30	40	100	110	110	190	150
Rapeseed	100	80	20	10	50	30	30	60	100
Soybean	50	50	30	100	240	220	150	150	150
Total	180	160	80	150	390	360	290	400	400
MEMO ITEMS:									
Oil use in vanaspati:									
Domestic	85	225	355	320	224	334	474	459	360
Imported	635	653	594	621	688	626	498	520	630
Total	720	878	949	941	912	960	972	979	990
Public distribution 1/:									
Total	355	437	404	505	707	730	670	820	1,000

1/ Imported oils only.

SOURCES: Government of India; partner country trade data; FAS; ERS estimates.

resolve to halt the rise in oil prices, large upward adjustments in the issue (sale) prices of imported oils to the vanaspati industry also indicate an intent to keep prices high to manage demand and encourage production. In August 1987, the oil issue price for the vanaspati industry was raised 30 percent from Rs.11,500 ($885) per ton to Rs. 15,000 ($1,154) per ton. The issue price for the PDS remains at Rs. 10,500 ($808) per ton, but may also be raised once domestic prices stabilize.

Palm and Rapeseed Oils Maintain Competitive Advantage

Palm oil continued to hold a dominant share of India's oil imports in 1986/87, as purchases rose about 10 percent to an estimated record 880,000 tons. Highly competitive prices, particularly for refined products such as palm olein, and widespread consumer acceptance remained the basis for its market dominance. Palm oil continued to

account for the bulk of PDS offtake, and also met some of the vanaspati industry's needs. However, increased price competition from rapeseed oil, a traditional oil that also has strong consumer acceptance, pushed palm oil's share of the market down from a record 66 percent in 1985/86 to about 57 percent in 1986/87. Rapeseed oil imports in 1986/87, primarily from Canada and the EC, more than doubled to an estimated record of 300,000 tons. Low rapeseed oil prices resulted in its increased use in the PDS, and as a substitute for soybean and palm oil in vanaspati.

Imports of soybean oil are estimated at 360,000 tons in 1986/87, up more than 40 percent from the 10-year low of 250,000 in 1985/86, but both the volume and the 23-percent market share remained well below that held in the early 1980's. Soybean oil's lack of consumer acceptance continued to prevent its use in the PDS, the major growth sector for imports, and price competition continued to constrain its use in vanaspati.

The U.S. share of India's soybean oil purchases also remained relatively small, with sales rising from nearly 38,000 tons (a 15-percent share) in 1985/86, to 47,000 (13 percent) in 1986/87. U.S. sales consisted of about 25,000 tons shipped through the Export Enhancement Program and about 20,000 provided through various P.L. 480, Title II programs. As during most of the 1980's, the remainder of India's soybean oil imports were purchased by the State Trading Corporation (STC) on cash terms at more competitive prices from other suppliers, primarily Brazil, Argentina, and Spain. With the exception of an estimated 40,000 tons of rapeseed oil donated by Canada, all purchases of palm and rapeseed oil were also made on cash terms from open market tenders. Malaysia and Indonesia accounted for most palm oil, and Canada and the European Community were the major rapeseed oil suppliers.

Near Record Oil Imports Forecast for 1987/88

Based on current crop assessments, edible oil imports are projected to rise to a record-matching 1.7 million tons in 1987/88. The PDS is expected to remain the Government's principal means of stabilizing domestic prices, with distribution of imported oils through the PDS projected to rise to a record of about 1 million tons. Although imported oil has been distributed at a faster pace than this during September November, this is typically the peak demand period and distribution is expected to slow during December July as improved domestic oil supplies ease the pressure on prices.

Allocations of imported oil to the vanaspati industry are also expected to be substantially higher than the last few years to contain the rise in vanaspati prices. The imported oil share in vanaspati was 50-55 percent of production during 1985/86 and 1986/87, and is projected to average 60-65 percent (650,000 tons) in 1987/88. Although oil has been allocated at 85 percent of total requirements during the peak demand season, allocations are expected to be lower during December-July. The outlook for relatively good domestic supplies of cottonseed, rice bran, and soybean oils, the major domestic oils used in vanaspati, and the higher issue prices for imports are expected to prevent imported oil use in vanaspati from averaging 80-90 percent as it did in the early 1980's.

Key uncertainties in the 1987/88 outlook are the size of the 1987/88 rabi crops of rapeseed and peanuts, and whether the STC elects to continue to hold abnormally large closing stocks of oil. Rabi crops substantially smaller than the current projections would boost import demand, particularly for oils used in the PDS, because rapeseed and peanut oils are primarily consumed as pure cooking oils. It is currently expected that the STC will continue to hold large stocks to meet strong 1988 festival season demand. However, a favorable 1988 monsoon season would likely ease speculative pressures, and reduce late season distribution needs, imports, and stocks.

Palm and, particularly, rapeseed oil are projected to account for all of the increase in imports in 1987/88, because of their suitability for use in both the PDS and vanaspati production, and because these oils are expected to remain more competitively priced than soybean oil. Palm oil imports are projected at a record 900,000 tons, up marginally from 1986/87, and rapeseed oil purchases are projected at a record 450,000 tons. Record exportable supplies and aggressive marketing by Canada and the EC

are expected to lead to a large gain in the use of imported rapeseed oil in both the PDS and vanaspati.

Soybean oil imports are currently projected to remain at about 360,000 tons in 1987/88. Brazil, Argentina, and Spain are likely to remain the most competitive and largest suppliers. U.S. exports are projected at about 50,000 tons, but could be larger if U.S. soybean oil becomes more price-competitive. Programs most likely to expand sales would be those that make U.S. soybean oil prices more competitive such as the EEP, and those offering some degree of concessionality, primarily P.L.-480. Commercial, dollar-denominated credits, such as those provided under GSM 102 are unlikely to be effective because India's cash reserves are sufficient, because the country has a long standing aversion to incurring debt for commodity imports, and because India could most likely borrow money more cheaply elsewhere.

Oilseed Imports Possible

The Government announced in September that it would lift its longstanding ban and permit import of up to 1 million tons of oilseeds, including 200,000 tons of soybeans and 800,000 of rapeseed, in 1987/88. It was announced as a limited, one-time-only relaxation of the ban to help meet the oilseed production shortfall and alleviate underutilization of processing capacity. Although the National Dairy Development Board reportedly will have the authority to handle 600,000 tons of the imports, no details have been provided on how the imports will be financed or priced. Imports are currently forecast at 100,000 tons of soybeans and 300,000 of rapeseed, but problems in programming the imports into the domestic marketing system, and the high cost of importing oilseeds rather than oil, make the outlook for large-scale imports highly uncertain.

In the past, the Government has rejected repeated requests by domestic processors to permit oilseed imports because of concern about undercutting domestic producer incentives and, since India has an exportable surplus of oilmeals, because oil imports are generally less costly in terms of scarce foreign exchange. Preventing producer disincentives, distributing imports among processors, and preventing large windfall profits to processors stemming from the large differential between domestic and world prices for oilseeds and oils, present a difficult problem to the Government. In addition, estimates suggest that, even if the meal is exported at premium prices, the foreign exchange cost of importing soybeans and, particularly, rapeseed is higher than simply importing the oil. However, if oilseeds were provided on concessional terms, there would be potential for both foreign exchange savings and domestic employment generation.

Pakistan

Edible Oil Imports Fall in 1986/87 Due to Record Production and Stocks

Oilseed production in 1986/87 increased over 6 percent to a record 3 million tons due to record output of cottonseed, which accounts for about 90 percent of Pakistan's oilseed production. The 1986 rapeseed harvest was off slightly because of a break in winter rains. Production of nontraditional oilseeds, including soybeans, sunflower, and safflower, continued to show only small gains. Because of the record cottonseed supplies, edible oil production increased 5.5 percent from the 1985/86 record. Efforts to expand oil production from sources other than cottonseed continued to be hampered by weak producer price incentives during 1986/87. Prices of nontraditional oilseeds remained low relative to those of competing crops like food grains and cotton. These sectors provide the major food staple, remain the top export earners, and have a stronger claim on Government priorities.

In 1986/87 (October/September), Pakistan's edible oil imports dropped 40 percent to an estimated 605,000 tons from the record 1 million tons the year before. Nevertheless, edible oil was Pakistan's third largest import, after petroleum and machinery. Imports of both palm and soybean oil were cut substantially. Low prices had led to record palm oil imports of nearly 700,000 tons in 1985/86 and, coupled with heavy arrivals of U.S. soybean oil shipped under P.L.-480 and GSM-102 programs, pushed 1985/86 imports and ending stocks to

Table 15--Supply and use of edible oils in Pakistan (October/September)

	1984/85	1985/86	1986/87 est.	1987/88 proj.
		1,000 tons		
Opening stocks	77	75	320	200
Production				
Cottonseed	205	252	269	256
Linseed	2	2	2	2
Rapeseed	78	83	81	80
Sunflower	4	7	10	12
Soybean	0	0	1	3
Total	289	344	363	353
Imports 1/				
Palm	487	692	360	350
Soybean	189	314	200	400
Other	4	1	45	25
Total	680	1,007	605	775
Exports	0	0	0	0
Domestic disappearance	971	1,106	1,088	1,133
Per capita (Kgs.)	9.8	10.9	10.4	10.6
Ending stocks	75	320	200	195

1/ Imports based on partner-country export data.

SOURCES: Government of Pakistan, partner-country trade data, USDA estimates.

unprecedented levels. Excessive opening stocks led to the decline in imports in 1986/87, as well as increased use of soybean oil in manufacturing vegetable ghee (hydrogenated oil).

The large stocks also delayed programming and arrivals of 1986/87 allocations of soybean oil under P.L. 480 and GSM-102, contributing to the sharp drop in soybean oil imports to about 200,000 tons. Soybean oil imports included 146,663 tons of U.S. origin, primarily from Pakistan's P.L.-480 allocation. The shipment and delivery of about 175,000 tons of U.S. oil using a 1986/87 GSM-102 allocation, intended to satisfy Pakistan's usual marketing requirement (UMR) for soybean oil, was delayed until October-December of the 1987/88 marketing year.

The drop in imports in 1986/87 contributed to a decline in per capita edible oil consumption to about 10.6 kgs., down from the peak of 11.1 kgs. in 1985/86. Stocks of palm and soybean oils were also reduced, according to current estimates, but remained high by historical standards.

Palm oil, purchased exclusively on commercial terms, continued to garner the lion's share of Pakistan's oil imports in 1986/87. Low relative palm oil prices resulted in a continued high proportion of palm oil use in vegetable ghee. In part because of the large stocks of soybean oil provided through U.S. export programs, imports of palm oil were cut almost in half to an estimated 360,000 tons in 1986/87, but palm oil retained a 60-percent market share.

Policy Changes Affect Edible Oil Imports

In April 1986, the Government announced a package of reforms in edible oil import and pricing policies. The existing surcharge on imported oils and the excise tax on vegetable ghee were abolished and replaced with a regulatory import duty on oils. Domestic prices of vegetable ghee and cooking oil were decontrolled, and the Government stopped selling vegetable oil to the private sector at subsidized prices. With these changes, private traders and processors, who had ceased importing oil because of high import duties and low administered domestic prices, were able to compete more fairly with the public sector Ghee Corporation of Pakistan (GCP). The measures were taken to encourage the private sector to compete with the GCP and to provide incentives for the private sector to seek credit, concessional, and barter trade possibilities. However, the Government has maintained a strong regulatory presence in the market, with its vegetable ghee factories still accounting for about 75 percent of production capacity.

The regulatory import duty was initially set at a level (Rs. 2,350 or $145 per ton) roughly equivalent to the previous import surcharge and excise tax, so there was no immediate impact on domestic oil prices or demand. However, the duty is subject to periodic review and was raised in August 1986 to Rs. 3,000 per ton ($178). Despite the duty, the private sector appears to have responded to the new policies by importing more oil. In 1986 (calendar year), the private sector accounted for 37 percent of all vegetable oil imports, up from only 5 percent the previous year.

Policy has historically been to keep domestic oilseed and oil prices low. However, the Government could curb growing outlays of scarce foreign exchange by raising the duty further. The Government has reportedly been satisfied with the deregulation measures and the assistance to the budget deficit from duty revenues. An increase in the duty would, by raising domestic prices, also promote area shifts to oilseeds and away from surplus crops such as wheat, rice, and cotton. These benefits notwithstanding, concern over the effects of higher consumer oil prices, as well as the availability of concessional oil supplies from the United States to meet a large part of consumption needs are likely to prevent aggressive use of the duty as a demand management or supply enhancement tool.

The deregulation of edible oil pricing and trade, which has placed public and private sector ghee units in direct competition, has created some problems in providing soybean oil through U.S. export programs. Soybean, palm, and rapeseed oil are close substitutes in vegetable ghee production and, during the last several years, the least-cost product has been a blend consisting primarily of relatively low-priced palm oil. U.S. soybean oil, including that received with concessional credits through P.L. 480, Title I and that purchased commercially using GSM-102 credits made available to fulfill the UMR of the P.L. 480 program, has been a high priced input when valued using its landed price. After deregulation, there was no incentive for private sector units to use the relatively high-priced soybean oil, and the units of the GCP, which had been handling the soybean oil imports until recently, could not compete with the private sector if a high proportion of soybean oil was used.

Difficulty in finding a means of making soybean oil competitive in Pakistan's newly deregulated market delayed the programming and shipment of U.S. soybean oil in 1986/87. To help solve the problem, the responsibility for handling imports of U.S. soybean oil was shifted from the GCP to the Trade Corporation of Pakistan (TCP) in July 1987. The TCP now markets the crude soybean oil to both GCP and private sector units at a price that is Rs. 500 per ton ($29) below the landed price of refined palm oil to cover refining costs. This mechanism, while necessitating a substantial budgetary subsidy to the TCP that partially offsets the Government's revenues from the edible oil import duty, may permit more orderly and timely programming of U.S. soybean oil shipments in 1987/88.

Oil Imports To Rise in 1987/88

Production of oils is forecast to increase about 1 percent in 1987/88 as cotton production holds steady. Only marginal gains are forecast for other oilseeds, which will continue to make only a minor contribution to edible oil supplies. The Government is expected to continue to hold domestic oil prices down and consumption is forecast to rise in 1987/88, although it may be restrained by somewhat slower growth in real incomes.

Edible oil imports are forecast to rise to about 775,000 tons in 1987/88, based on the assumed levels of production and consumption and no change in stocks. Palm oil is forecast to lose its dominant market share for the first time since 1981/82, primarily because of large expected receipts of U.S. soybean oil. Shipments of U.S. soybean oil through the P.L. 480, Title I program, which must be completed during the October/September year, are estimated at 180,000 tons. Shipments of U.S. soybean oil through the GSM-102 program during 1987/88 will include about 175,000 tons delayed from the 1986/87 allocation, in addition to at least some of the new 1987/88 allocation of about 140,000 tons. Total 1987/88 soybean oil imports are forecast to rise to 400,000 tons, all of U.S. origin, with U.S. export programs crowding out sales by competing suppliers.

Palm oil imports are projected at 350,000 tons in 1987/88, with lower priced palm oil meeting nearly all demand not filled by U.S. soybean oil. Edible oil stocks are expected to remain high because of the likelihood that some soybean oil shipments will again be delayed to the end of the marketing year.

Sri Lanka

Record Coconut Output in 1986

Coconuts are the leading oilseed produced, with insignificant production of soybeans, peanuts, palm, and sesame seed. Good weather led to a record harvest of over 3 billion coconuts in 1986. However, the strong demand for fresh coconuts in Sri Lankan

cooking limited copra output to 232,000 tons, 4 percent below 1985. An estimated 70 percent of coconut production is consumed fresh, with about 10 percent going to dessicated coconut and the remainder to copra. Nevertheless, record amounts of coconut oil and meal were produced in 1986. Compared with 1985, coconut oil output was 143,300 tons, up 10 percent, and copra meal output was 72,000 tons, up 11 percent.

Sri Lanka's copra exports, mainly to Pakistan, reached 10,000 tons, the highest level since 1972. Copra wholesale prices were weak during most of 1986, averaging Rs.5,754 ($206) per ton, compared with Rs.9,258 ($341) in 1985. Coconut oil exports were 85,000 tons, 29 percent above 1985, but earnings were lower because of a 41-percent drop in average export prices. Average wholesale prices fell to Rs.8,293 ($296) per ton in 1986 from Rs. 14,952 ($551) per ton in 1985, yet began to strengthen in late 1986 as world supplies diminished. Imports of other oils were negligible. The share of copra meal exported increased to 55 percent, from 46 percent in 1985 with the rest used for domestic feed. To supplement local feed supplies, 15,000 tons of soybean meal was imported from Japan and India in 1985 and 1986.

Drought Causes Strong Drop in 1987 Coconut Output

Coconut production is forecast to decline by nearly one third in 1987 because of drought and low fertilzer use. The downtrend in fertilizer use continues from 1986 when an estimated 31,500 tons were used, compared with 41,000 tons in 1985. With continuing strong local demand for fresh coconuts, copra output is estimated to have fallen to 100,000 tons (down 57 percent), coconut oil output to 67,000 tons (down 52 percent), and copra meal to 30,000 tons (down 58 percent).

Substantial declines in 1987 coconut product export availabilities are projected, with copra exports down to 2,000 tons, coconut oil to 25,000 tons, and copra meal to 4,000 tons. Imports of palm oil, the only vegetable oil imported, are forecast to increase to 20,000 tons, from 17,000 tons in 1986, due to the shortfall in domestic coconut output. In order to encourage production of oilseeds (soybean, peanut, and sesame), there is a 60-percent import duty on those oils. Palm oil, which has an import duty of only 5 percent, can be imported more cheaply and allow greater quantities of higher priced coconut oil to be exported, thus earning needed foreign exchange. Protein meal imports are forecast to increase to 20,000 tons to help meet domestic poultry and livestock needs.

COTTON SECTOR DEVELOPMENTS AND OUTLOOK

Overview

Much of Cotton Supply Outlook Remains Uncertain

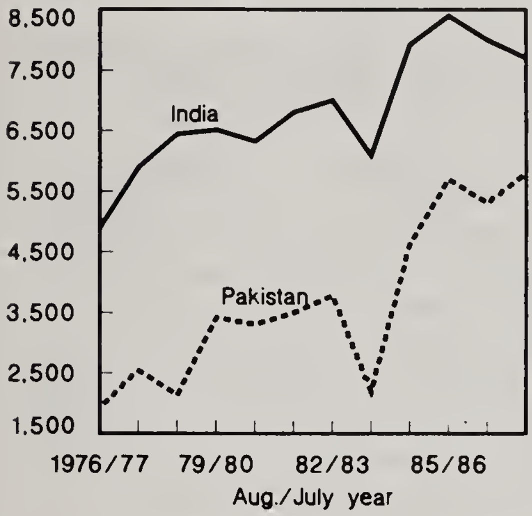
After a prolonged drought, the size of India's 1987/88 cotton crop remains uncertain in light of varying growing seasons, partial irrigation, and relatively strong prices. In contrast, Pakistan's crop is highly irrigated and can be better estimated at this time. Current estimates show India's crop recovering marginally from 1986/87's poor harvest, and a 4-percent decrease in Pakistan's production from last year's record. Although the dry weather affected both countries, the effects were mitigated by irrigation, increased plantings stemming from the profitability of improved varieties and, in India, by rising open market prices that boosted producer incentives.

Projected export levels reflect the production outlook. With relatively high production and price competitiveness, Pakistan's cotton exports are projected to hold at 2.9 million bales (480 lbs. each). Domestic supplies are also projected to support sustained rapid growth in mill consumption to meet export demand for yarn and textiles, while maintaining comfortable levels of raw cotton stocks. In India, however, raw cotton exports will be restricted until the production and stock situation can be better assessed. Current forecasts are for a very tight supply situation, sharply reduced exports of about 250,000 bales, and uncomfortably low stocks. Continued strong domestic mill demand to meet expanding exports of yarn and textiles could lead to cotton imports by India. However, imports are considered unlikely because internal prices remain below world prices.

Overall, the region's cotton exports, which averaged 1.7 million bales annually

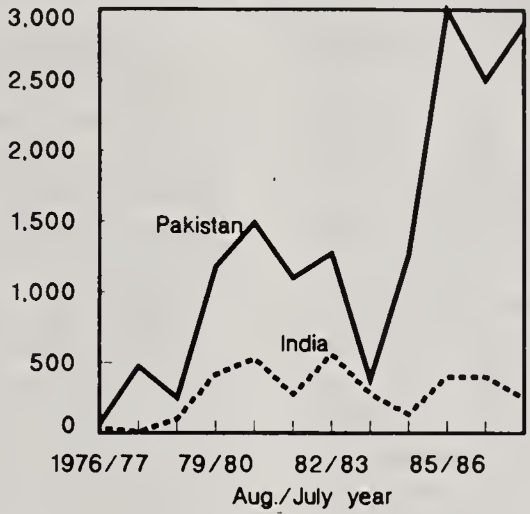
Production

Thousand 480-lb bales



Exports

Thousand 480-lb bales



Imports

Thousand 480-lb bales

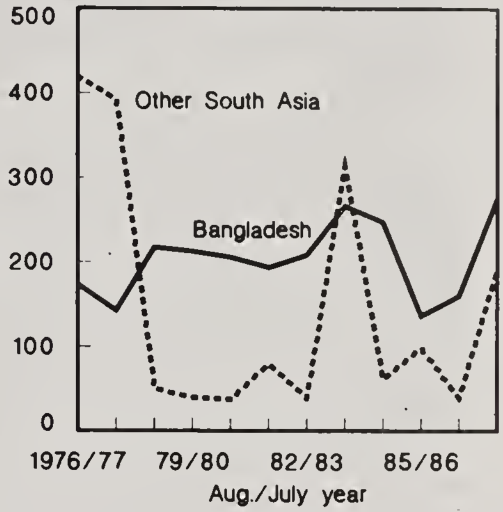


Table 16—Supply and use of cotton in India and Pakistan (August/July)

Year	Area	Yield	Production	Imports	Exports	Consumption 1/	Ending stocks
	1,000 ha.	Kgs./ ha.	1,000 480-lb. bales				
India							
1982/83	7,871	194	7,004	0	557	6,383	2,184
1983/84	7,765	171	6,086	0	276	6,614	1,380
1984/85	7,437	232	7,925	0	132	7,117	2,056
1985/86	7,581	240	8,355	59	344	7,191	2,935
1986/87 est.	7,280	222	7,418	0	1,130	7,850	1,373
1987/88 proj.	7,500	224	7,700	100	250	7,700	1,223
Pakistan							
1981/82	2,215	343	3,494	5	1,097	2,396	241
1982/83	2,263	364	3,781	4	1,273	2,600	153
1983/84	2,221	214	2,188	279	377	2,150	93
1984/85	2,236	451	4,628	26	1,261	2,436	1,050
1985/86	2,366	522	5,669	6	3,148	2,664	913
1986/87 est.	2,502	527	6,060	5	2,885	2,989	1,104
1987/88 proj.	2,515	502	5,800	5	2,900	3,295	714

1/ Includes losses.

SOURCES: Official government data in each country; USDA estimates.

during 1980/81–1982/83 and were record high in 1986/87 (August/July), are projected to slip to about 3.2 million in 1987/88. Cotton imports by Bangladesh, the region's major cotton importer, are expected to decline from the 1986/87 record because of high stocks and smaller gains in textile exports. However, the region's cotton imports could increase substantially in 1987/88 if Indian domestic prices rise sharply and cotton is imported to meet yarn export commitments.

Record South Asian Cotton Exports in 1986/87

Cotton exports by Pakistan and India climbed to a record 4 million bales in 1986/87, as India's exports jumped to a record 1.1 million and more than offset a small drop in Pakistan's exports to 2.9 million. Indian exports benefited from higher quotas and lower minimum export prices despite an 11-percent setback in the 1986/87 cotton

harvest because of bad weather. Reduced production, record exports, and large gains in mill use and textile exports led to a sharp reduction in India's cotton stocks. Tightening supplies led to a recovery in Indian cotton prices and producer incentives after a 2-year slump.

Pakistani cotton production sustained its recent strong upward trend in 1986/87, increasing 7 percent based on larger plantings and record-matching yields. Raw cotton exports slipped 8 percent from the 1985/86 peak of 3.15 million bales because of increased U.S. competition, but domestic mill use continued its recent strong growth, primarily to meet burgeoning export demand for yarn and textiles. Pakistan's cotton stocks edged up to a record 1.1 million bales in 1986/87, exerting continued downward pressure on domestic prices.

Bangladesh imported a record amount of cotton 1986/87, as low world prices fostered stock replenishment. The Government removed the cotton import duty during 1986/87 and also clamped down on illegal imports of partially-made-up garments--measures intended to stimulate textile production and exports.

Bangladesh

Rapid Growth in 1986/87 Cotton Imports

Bangladesh's cotton imports jumped 60 percent to a record 300,000 bales in 1986/87 (August/July). The surge was stimulated by low world cotton prices, the need to replenish domestic stocks, and removal of the cotton import duty in July 1986. Domestic mill demand increased as the removal of the duty and tighter checks on illegal imports of partially-made-up garments made mills more competitive. Domestic use rose 4 percent above 1985/86 despite limited growth in U.S. and EC textile quotas, and stocks were rebuilt to nearly 100,000 bales.

The United States regained its leading market share and accounted for 40 percent of cotton imports in 1986/87, after strong competition from Pakistan, Sudan, and the Soviet Union caused the U.S. share to drop to about 7 percent in 1985/86. About 55,000 bales, or 45 percent of U.S. exports to Bangladesh, were supplied concessionally under P.L.-480. U.S. commercial sales rebounded from zero in 1985/86 to about 60,000 bales.

Bangladesh's cotton imports are forecast to drop to about 275,000 bales in 1987/88, despite a 5-percent increase in mill use, because there is no need for further stock building. Some growth in U.S. and EC textile quotas, and the favorable policies initiated in 1986/87 are expected to keep mill demand expanding and necessitate continued high stocks. The United States is forecast to maintain its top supplier position with 110,000 bales, about half through P.L.-480. However, the United States will continue to face stiff competition from Pakistan and Sudan for commercial sales.

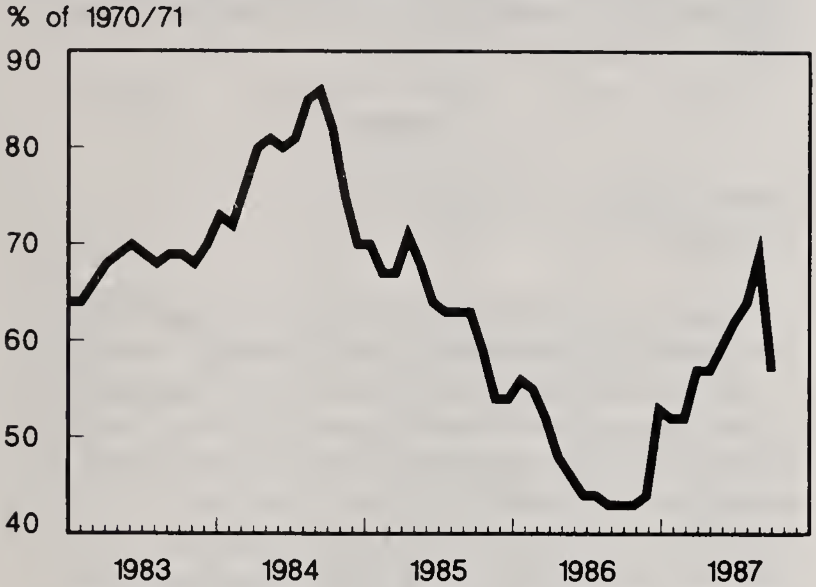
India

Cotton Supply Outlook Remains Uncertain

The 1987/88 cotton crop is currently forecast to be up only about 4 percent to 7.7 million bales (480 lbs. each), with dry weather in key northern producing areas preventing a stronger recovery from the poor 1986/87 harvest. However, there is still uncertainty regarding the size of the crop because of the diverse growing seasons for cotton in India, the level of protection afforded by irrigation in some areas and, after 2 years of weak prices, the strong price incentives faced by growers during 1987/88. Producer, processor, and trade groups disagree more than usual on the size of this year's crop. And, as in the past, inability to obtain a reliable assessment of either the size of the crop or the cotton stock position is hampering government regulatory decisionmaking.

Heavy crop losses are reported for the second consecutive year in the major producing state of Gujarat, where rainfall was about 50 percent of normal and only about 30 percent of the crop is irrigated. Crop conditions in Punjab, Haryana, Maharashtra, and Andhra Pradesh, the states that have contributed most heavily to recent production gains, are more difficult to assess. Despite very dry weather, heavy losses are not anticipated in Punjab and Haryana because most cotton area is irrigated. Production is mostly rainfed in Andhra Pradesh and

India: Deflated Wholesale Price Index for Cotton



Maharashtra, but rainfall appears to have been near normal in key parts of these states and there is a great deal of flexibility in planting and harvesting schedules.

In most growing areas, it is unclear how the sharp recovery in domestic cotton prices that began in the fall of 1986 has affected area and yields. Cotton prices plunged following record harvests in 1984/85 and 1985/86, but rallied sharply in real terms between September 1986 and August 1987. The price recovery stemmed from the poor crop in 1986/87, coupled with large increases in exports of both raw cotton and cotton yarns and textiles. The outlook for strengthened prices may have stimulated larger than expected plantings in 1987/88, particularly of improved varieties, as well as more use of irrigation and other inputs. The recovery in domestic prices has greatly reduced the financial burden on government agencies responsible for conducting price support operations.

Poor Weather Also Affected 1986/87 Crop

Following consecutive harvests that shattered records in 1984/85 and 1985/86, cotton production fell about 11 percent to an estimated 7.4 million bales in 1986/87. Dry weather in most cotton growing areas of central and south India, including Gujarat, Maharashtra, Karnataka, and Andhra Pradesh, led to a decline in both area planted and yields. Weakening prices may also have affected plantings, although area and yield reportedly remained high in the key irrigated areas of Punjab and Haryana.

According to available information, the drop in production in 1986/87 corresponded with both record exports and a record gain in domestic cotton use. As a result, cotton stocks, which had accumulated to burdensome levels in the previous 2 years and depressed internal prices, dropped sharply. Stocks are estimated to have fallen to about 1.4 million bales at the end of 1986/87—somewhat below the informal target of 3 months' mill consumption. Domestic consumption of cotton, including both mill and non-mill use, is estimated to have increased more than 8 percent to a record 7.5 million bales in 1986/87 because of lower prices, stronger domestic demand, and large increases in yarn and garment exports.

Exports of Textiles and Raw Cotton Up Sharply

Available data for 1986/87 (April/March years) indicate cotton textile exports posted particularly strong gains. A 44 percent jump in yarn exports to Rs. 616 million ($48.3 million) and a 50 percent jump in sales of ready-made garments to Rs. 15.1 billion ($1.18 billion) boosted total exports of cotton textiles 26 percent to Rs. 26 billion ($2.04 billion). While relatively low domestic raw cotton prices contributed to textile export gains, exports were also enhanced by an easing of regulatory restrictions under the Government's long term strategy for the textile sector, by new export incentives for yarn, and by larger garment export quotas under the new international Multi-Fiber Agreement.

Raw cotton exports also increased sharply, nearly tripling to an estimated record of 1.1 million bales in 1986/87 (August/July). Highly competitive internal prices, a more liberal export quota policy, and a reduction in minimum export prices contributed to larger exports. Although domestic prices strengthened through most of 1986/87, Indian cottons—primarily long and extra-long staple varieties—remained highly competitive in world markets. State controls on trade typically keep domestic producer and trade prices below world market prices to ensure affordable supplies of cloth and competitive exports of textiles. Major markets for Indian

cottons include Japan, Taiwan, Hong Kong, and South Korea, as well as various countries in eastern and western Europe.

More liberal raw cotton export quota and pricing policies permitted the surge in cotton exports in 1986/87. Exports have typically been subject to highly unpredictable and sporadically announced quotas, in large part because of inability to accurately estimate domestic supply. To facilitate more orderly export marketing, however, the Government announced in 1986 a minimum annual quota of 470,000 bales of staple cotton during 1986/87-1988/89. The record 1986/87 exports include large holdover shipments from 1985/86 quotas, as well as shipments from the 1986/87 quota. To ensure competitiveness, the Government also reduced its minimum export prices for cotton --a mechanism used to minimize price competition among Indian exporters.

Cotton Imports Possible in 1987/88

Raw cotton exports are projected to drop sharply to about 250,000 bales in 1987/88 because of reduced stocks, drought damage to the cotton crop, and continued higher demand for exports of cotton textiles. Despite the earlier intent to maintain a minimum level of export quotas, the Government has already failed to release all of the 1986/87 quota, and it appears that any release of 1987/88 quotas will have to await confirmation that domestic production and stocks are sufficient. Based on the current USDA crop assessment, 1987/88 exports are expected to include only small holdover shipments from 1986/87 quotas plus normal exports of low-quality, nonstaple cottons.

In response to mill sector complaints of shortages and high prices, the Government announced in July that imports of up to 780,000 bales of cotton will be permitted on the condition that they are linked to confirmed yarn export commitments. However, no imports have yet occurred because internal prices remain below world prices, and it is highly uncertain whether any imports will occur. Mill sector interests benefit from low domestic prices, and the mill sector's habitual stand against exports in favor of imports, is not necessarily based on an objective assessment of supplies. Domestic cotton prices dipped sharply during October and November with the onset of the harvest in north India, making it unlikely that imports will be price-competitive with local cottons at least through early 1988.

Pakistan

Another Record Cotton Crop in 1986/87

Cotton production in Pakistan again bettered its record in 1986/87, rising 7 percent to 6.1 million bales (480 lbs. each). Larger plantings and sustained higher yields led to the gain. Yield was sustained by ideal weather, adequate availability of fertilizer and improved varieties, and a small increase in pesticide coverage. The most important new variety is NIAB-78, which is early-maturing, has twice the yield potential of previous varieties, and yields a higher percentage of lint. NIAB-78 has been spreading rapidly in Punjab province, where it has been officially released, and also in the Sind, where it has not.

Support prices for lint were not raised in 1986, but the high yields now possible in cotton buttressed profitability sufficiently to induce additional planting. Cotton competes for area primarily with rice and sugarcane, and both basmati rice and sugarcane have had substantial support price increases in the last 2 years.

Continued Rises in Use, Exports, and Stocks

Record supplies and highly competitive export prices contributed to Pakistani cotton exports of about 2.9 million bales in 1986/87 (August/July). This represented an 8-percent decline from the previous year's record 3.1 million bales, but both years' shipments were virtually double those in any previous year. Record domestic demand was fueled by rapidly growing yarn exports and the revival of several "sick" mills. The Cotton Export Corporation (CEC) of Pakistan exported substantial amounts of cotton at a loss to maintain Pakistan's market share and stem the further burdensome buildup of stocks. Nevertheless, ending stocks increased over 20 percent to 1.1 million bales, inflating the CEC's operating costs.

Because of aggressive marketing by the CEC, more Pakistani cotton went to markets

Table 17--Pakistan's estimated exports of cotton by country of destination, (August/July)

Country	1983/84	1984/85	1985/86	1986/87
	1,000 480-lb. bales			
Bangladesh	---	52	73	30
China	5	---	---	---
Hong Kong	40	179	297	315
Indonesia	---	51	152	150
Italy	5	45	143	200
Japan	159	253	397	500
South Korea	15	45	232	145
Taiwan	10	157	569	375
Thailand	---	70	151	200
Other	98	409 1/	1,134 2/	970 3/
Total	377	1,261	3,148	2,885

1/ Including 69,000 bales to Belgium. 2/ Including 89,000 bales to West Germany, 95,000 to Belgium, 106,000 to Eastern Europe, and 86,000 to Portugal. 3/ Including 75,000 bales to Portugal and 150,000 to West Germany.

SOURCE: USDA estimates.

in western Europe and the Far East. Although unit values continued to be low, cotton export earnings exceeded $400 million, second only to cotton yarn among Pakistan's exports. Both were major factors in Pakistan's improved balance of payments situation. The average export price was about 31 cents/lb., compared with 37 cents in 1985/86. Losses incurred by the CEC in carrying large stocks and exporting some cotton at below cost are estimated at about $130 million in 1986/87. (See the Special Article for a discussion of cotton sector subsidies and taxes.)

Cotton Crop Unlikely To Change in 1987/88

The 1987/88 crop is estimated at about 5.8 million bales, down 4 percent from last year's record. Area was up marginally, but yields were affected by unusual weather. After early dry weather, timely rains supplemented irrigation water, and temperatures and sunshine were adequate. However, abnormally dry conditions in some areas reportedly reduced boll formation and filling. Support prices, which were announced well after planting, were virtually unchanged again, although in dollar terms they continued to decline with the depreciation of the rupee.

Consumption, Exports, and Stocks in 1987/88

Pakistan's cotton exports are forecast to remain at about 2.9 million bales in 1987/88. The quality of the fiber, particularly its strength and cleanliness, has made it very popular in Pakistan's traditional Far Eastern markets like Japan and Hong Kong, and in more U.S.-dominated markets like Taiwan and Korea. Moreover, it seems unlikely that Pakistan will alter its strategy of subsidizing exports, when necessary, via the trading losses of the CEC. With domestic and export yarn prices and foreign orders still strong, domestic consumption is expected to climb to 3.1 million bales, another record. Although spinners have contended that the yarn export duty and export restrictions have resulted in a stock buildup, the Government appears to have won both ways, as both duty revenues and foreign exchange earnings from yarn exports have been substantial. High rates of domestic use and exports are expected to allow a 35-percent reduction in stocks, to a somewhat more manageable 700,000 bales.

SPECIAL ARTICLE

PAKISTAN'S COTTON PRODUCTION AND EXPORTS: HOW IMPORTANT ARE SUBSIDIES?

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Abstract: Pakistan is a major producer of cotton and was the world's leading exporter in 1985/86. Producers benefit from almost ideal agro-climatic conditions, including rich soils, plentiful sunshine, and extensive canal and tubewell irrigation systems. Government intervention, however, tended to dampen the incentive to grow cotton, as domestic prices were kept low to favor the textile industry. Producers were implicitly taxed by the Government's trade and output price policies, although input subsidies, primarily on fertilizer, partially offset this effect. Since 1984/85 dramatic increases in cotton production in Pakistan, due in part to the rapid spread of a new high-yielding variety, coincided with a world glut and a sharp decline in prices. Under these conditions, the Government of Pakistan subsidized exports to protect its foreign exchange earnings and hold down the costly stock buildup.

Keywords: Pakistan, cotton, production, exports, producer subsidies, consumer subsidies.

In the world cotton[1] market, Pakistan has become a major competitor of the United States. In 1985/86, Pakistan was the world's largest exporter of cotton, surpassing the USSR, China, and the United States. Strong production increases beginning in 1984/85 helped Pakistan's share of world exports rise from about 6 percent to over 15 percent. In 1986/87, the United States regained top position among cotton exporters, but Pakistan remained in second place with nearly 13 percent of the market.

Cotton in Pakistan's Agriculture

Much of Pakistan is suited to the production of irrigated cotton. In the Indus Valley, where irrigation systems were developed very early, cultivation of cotton can be traced back at least 5,000 years. The species first grown were the Asiatic, short-staple varieties, now termed "Desi." New World (also called "American" or "Upland") cotton was introduced into Pakistan in the 20th century. The latter has longer fibers and now occupies 92 percent of the cotton area; Desi cotton covers the other 8 percent.

Rice, wheat, cotton, and sugarcane are the four most important crops in Pakistan. Of these, wheat is a "rabi," or winter crop; the others are grown in the "kharif," or summer season. Most cotton is rotated with wheat or fallow. At present the relatively long growing periods of existing varieties of both wheat and cotton often prevent adequate land preparation.

Among the kharif crops, there are two land-use patterns. Where agro-climatic factors result in comparable productivity, cotton, rice, and sugarcane compete for acreage on the basis of relative price changes. However, in some areas, agro-climatic factors favor one crop, so there are also dedicated rice areas and cotton areas. Cotton is often found in areas of lower rainfall and where pest control measures have been successful.

Inputs

About 90 percent of Pakistan's agricultural production and all Upland cotton

[1] Cotton is also referred to interchangeably as "raw cotton" and "lint."

come from irrigated land. Desi cotton is all rainfed. Between 70 and 80 percent of the total cultivated area is irrigated. Extensive canal systems are supplemented by 200,000 tubewells.

On average, Pakistan's cotton farmers apply over 80 kg/ha of fertilizer nutrients. However, a recent study found that various suboptimal cultural practices, many related to field preparation and cultivation, result in low responsiveness to fertilizer applications. Fertilizer expenditures per hectare are comparable among the major crops, except for sugarcane, which is a longer duration crop and has the highest level.

Plant protection is particularly important in cotton production. Cotton is plagued by sucking pests (like aphids) and boring pests (particularly various bollworms). Much of the recent increases in yield may be attributed to greater use and effectiveness of chemical plant protection measures. In 1985/86, for the first time over half the cotton area received at least three sprayings, triple the coverage only 3 years earlier. At the same time, integrated pest management techniques are being investigated. These techniques promise comparable protection at lower cost.

Inputs are often more effective in combination. This is especially true of fertilizer and water, since nutrients must be dissolved to be absorbed. It is also true of plant protection measures and irrigation water. A drier environment with controlled applications of water often reduces the rate of pest multiplication. Pakistan's extensive irrigation system is thus a major asset that could contribute to continuing increases in productivity.

Production Trends

Pakistan's total cropped area and area under cotton have tended to increase over the past 20 years. Cotton area increased about 1.6 percent per year from about 1.6 million hectares in 1965/66 to about 2.4 million in 1985/86. Cotton now accounts for about

Pakistan: Cotton Production

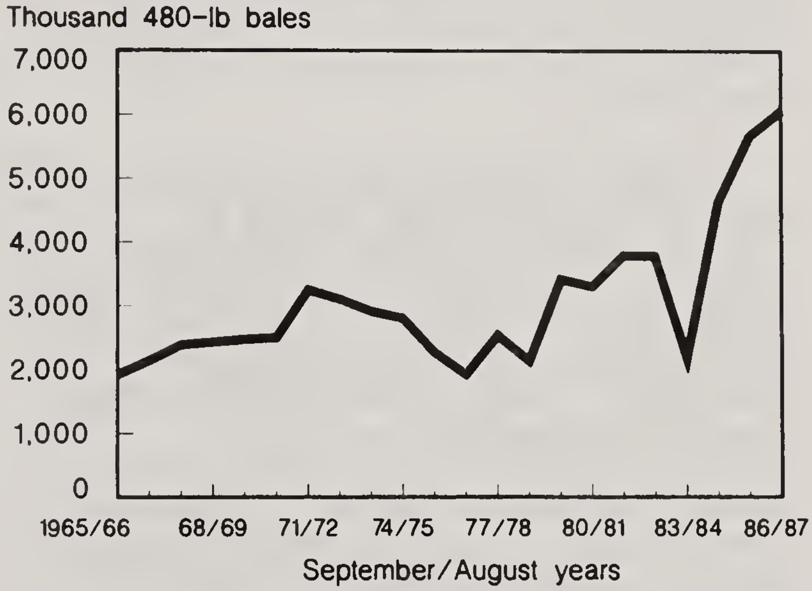


Table 1--Pakistan: Cotton area yield and production by province

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87
Area				1,000 hectares			
Pakistan, total	2,108	2,215	2,263	2,221	2,236	2,366	2,502
Punjab	1,506	1,573	1,613	1,563	1,568	1,760	1,860
Sind	599	638	647	656	671	671	640
Yield				Kg/ha			
Pakistan, total	341	343	364	214	451	522	527
Punjab	317	313	343	178	482	559	589
Sind	402	420	416	302	374	373	345
Production				1,000 480-lb. bales			
Pakistan, total	3,300	3,494	3,781	2,188	4,628	5,669	6,060
Punjab	2,191	2,259	2,541	1,275	3,473	4,520	5,036
Sind	1,105	1,231	1,237	911	1,152	1,149	1,014

SOURCES: Agricultural Statistics of Pakistan, 1985; FAS.

Table 2--Pakistan: Production of raw cotton by staple

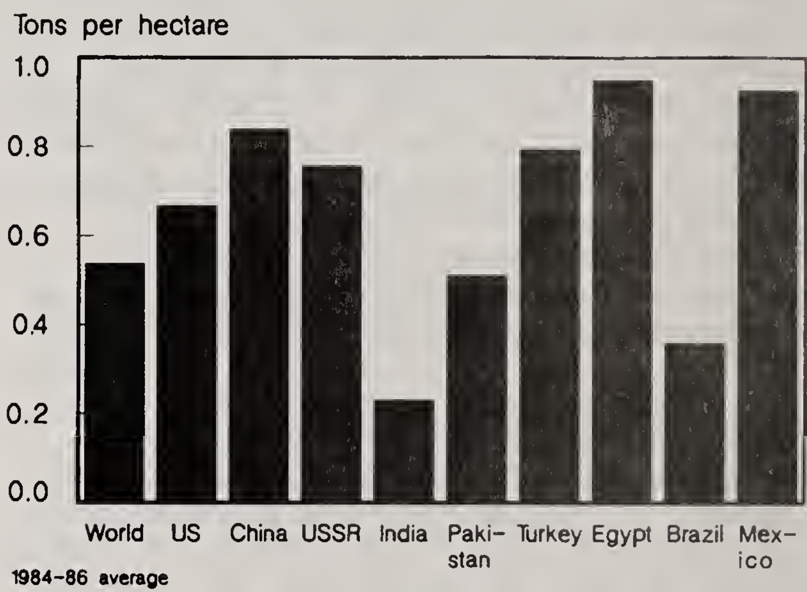
Year	Short (under 13/16")	Medium (13/16"-1")	Medium Long (1-1/32"-1-3/32")	Long (1-1/8"-1-5/16")	Total
			(1,000 375-pound bales)		
1977-78	176	2,565	427	65	3,233
1978-79	205	1,863	584	10	2,662
1979-80	194	2,917	1,094	77	4,282
1980-81	178	1,746	2,217	60	4,201
1981-82	183	1,912	2,243	60	4,398
1982-83	186	1,598	2,810	250	4,844
1983-84	130	1,248	1,102	427	2,907
1984-85	154	1,515	2,625	1,636	5,930
1985-86*	179	1,840	4,106	1,138	7,263

SOURCE: Pakistan Central Cotton Committee.

three-quarters of the area under cash crops and over 10 percent of the total cropped area. Virtually all cotton is grown in the Punjab and Sind provinces.

Cotton yields showed no upward or downward trend between 1965/66 and 1982/83. Annual variation (coefficient of variation[2]) was substantial, however, at about 13 percent. The 1983/84 crop year was very bad because of excessive rain and pest infestations. Over the next 3 years, yields increased dramatically from the 1981/82-1982/83 average of 349 kg/ha (lint basis) to 451 kg/ha in 1984/85, 522 kg/ha in 1985/86, and 533 kg/ha in 1986/87. Virtually all of the increase came in the Punjab, as yields in the Sind stagnated.

World: Cotton Lint Yields



Why would area continue to increase quite steadily—the coefficient of variation was less than 5 percent—while yields were subject to substantial fluctuation? The answer lies in profitability. The soils and irrigation systems of the Indus Valley favor cotton; any adverse government interventions (e.g., keeping producer prices low) were not strong enough to dissuade farmers from growing the crop. A recent study found that cotton had the highest revenue/cost ratios of any major crop during 1983-86. Cotton yields fluctuated, however, in part because an effective pest management scheme was lacking. In addition, variations in rainfall sometimes left reservoirs low, limiting the effectiveness of surface irrigation systems. Deferred or inadequate maintenance of these systems has also reduced their performance.

The confluence of new, higher yielding varieties and much improved pest management have been largely responsible for the rapid increase in yields. Good weather has also been a factor. The more important new varieties (and years of release), all approved for the Punjab, are MNH-93 (1981), MS-84 (1983), and NIAB-78 (1983). NIAB-78, which is an early, vigorous variety with a high yield of lint, has become very popular. Besides its yield and quality, its earliness may make it attractive

[2]As measured by the standard error of the regression over the mean of the dependent variable in a linear regression of yield on a trend variable.

Table 3--Pakistan: Characteristics of cotton varieties

Name of variety	Year of release	Ginning percentage	Staple length (inches)	Micronaire value	Pressley strength ('000' lbs/ sq. inch)
PUNJAB PROVINCE					
B-557	1975	34.5	1-1/32	4.5	92.9
MNH-93	1980	36.5	1-1/16	4.7	94.0
NIAB-78	1983	36.6	1-1/32- 1-1/16	4.6	92.5
MS-84	1983	34.0	1-1/4	3.9	91.3
SLH	1984	34.0	1-1/32	4.4	95.8
SIND PROVINCE					
M-100 (N.T. Sind)	1963	34.0	1-1/32- 1-1/16	3.5-4.0	85.0
H-59-1 (Qallandari)	1974	34.0	1-1/8	3.5-3.7	90.0
S-59-1 (Sarmast)	1975	34.0	1-1/8	3.5-3.7	92.7
K-68-9	1977	33.0	1-3/16	4.3	96.1
TH-1101	1985	35.0	1-1/16	4.0-4.4	89.0-90.0

SOURCE: Asian Development Bank.

because it permits more timely planting and better preparation for the succeeding wheat crop. Until the release of TH 1101 in 1985, there had been no new variety released for the Sind since 1977.

With improvements in varieties and pest management, production increased 60 percent between 1982/83 and 1986/87, from 3.78 million bales (of 480 lbs.) to 6.06 million bales. The apparent advantage in improved varieties allowed the Punjab to increase its share of production from about two-thirds in the early 1980's to four-fifths in the last 2 years.

These enhancements have brought Pakistan's average yield nearly to the world average. However, it is still below that of almost all the major cotton-producing countries. Among those, Pakistan surpasses only India and Brazil. Given Pakistan's advantage in irrigation, there is considerable scope for improved yields.

Cotton in Pakistan's Economy

Cotton has always been the most important fiber crop in Pakistan, and the cotton textile industry has always been a major part of the economy. Manufacturing output now makes up about 20 percent of GDP. Cotton-based processing and manufacturing is the largest subsector, followed by food and beverages. By 1983/84 large cotton mills employed about 250,000 workers, or about half of the workers in all manufacturing industries. There were over 160 mills, with an installed capacity of over 4.2 million spindles. Their output of yarn and cloth was worth about $600 million.

Production of cotton yarn has risen almost continuously since independence (1947). The volume of cotton cloth produced in the large-scale mill sector peaked in the early 1970's, but exports of cloth have increased based on expanding production by smaller, more flexible "powerlooms" and in other subsectors. By 1985/86, the value of Pakistan's total raw cotton and cotton product exports reached over $1.1 billion, or 37 percent of total exports. The share of raw cotton in these exports has fluctuated considerably with production and mill demand, averaging about 30 percent, but there has been no upward or downward trend.

Table 4--Pakistan: Composition of exports

Item	1982/83	1983/84	1984/85	1985/86	1986/87
	Rs. million				
Raw cotton	3,897	1,772	4,368	8,291	7,676
Rice	3,683	5,688	3,340	5,527	5,053
Cotton cloth	3,579	4,856	4,638	5,083	5,931
Cotton yarn & thread	3,308	3,047	4,046	4,573	8,766
Ready-made garments	2,025	2,950	2,662	4,214	7,800
Leather	1,195	1,972	2,325	2,900	4,079
Wool carpets	1,886	2,171	2,020	2,668	3,420
Fish & preps.	897	1,007	1,231	1,335	1,930
Total	34,442	37,339	37,979	49,592	63,268

SOURCE: Pakistan: Monthly Bulletin of statistics (October, 1987),Economic Survey, 1986-87, and ERSestimates.

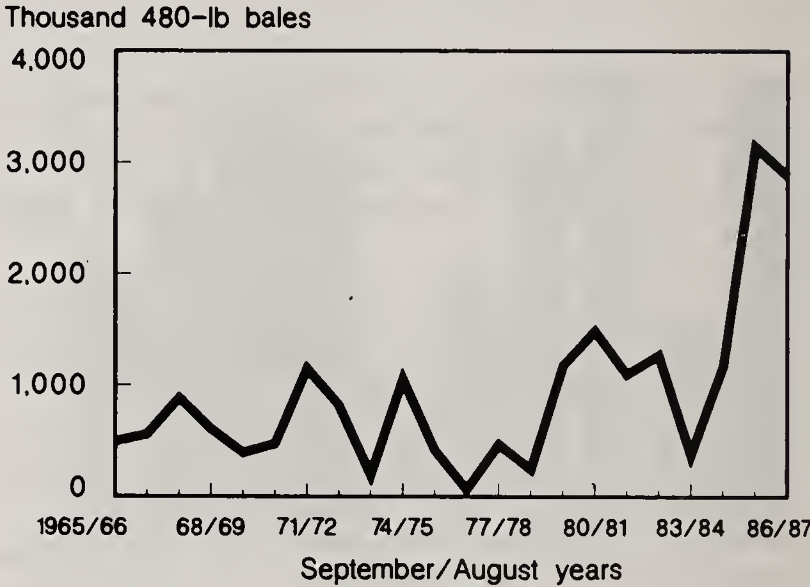
Cotton Exports

Over the 20 years ending in 1984/85, the volume of Pakistan's raw cotton exports fluctuated greatly but showed no upward or downward trend; the coefficient of variation was over 55 percent. In value terms, however, exports of cotton lint, yarn, and cloth all grew 15 percent or more per year during 1969/70--1984/85. In 1985/86, both exports and beginning stocks jumped dramatically as increases in yields in two consecutive crops enlarged domestic surpluses.

Cotton exports from Pakistan and the United States compete directly in many Asian and other markets. Most U.S. cotton exports are of a medium staple length (between 1" and 1-1/8"); most of Pakistan's production and exports are of a similar staple length (between 1-1/32" and 1-3/32"). In the mid-seventies, the United States sent 83 percent of its cotton exports (by volume) to Asian countries that were among its top 10 markets. During the same period, Pakistan sent 79 percent of its cotton to Asian countries among its top 10 markets. In the early eighties, the United States still sent 62 percent to such Asian markets, and Pakistan sent 59 percent. In these markets, Pakistan's cotton is reported to compete favorably with Texas Orleans cotton (1" staple) because of its superior strength.

Japan is the largest importer from both countries, and Hong Kong and China have also been important. Korea and Taiwan are large markets for the United States in which

Pakistan: Cotton Exports

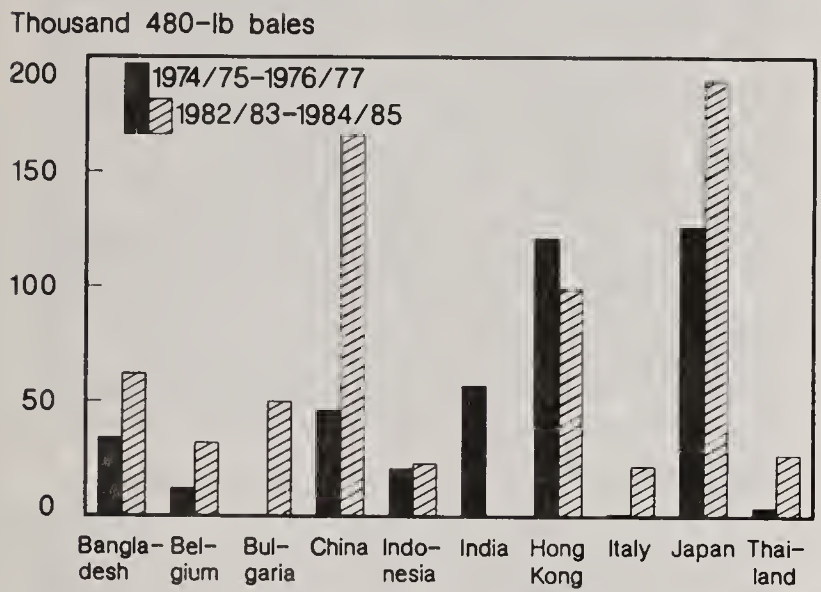


Pakistan did not traditionally compete. In 1985/86 and 1986/87, however, Pakistan's exports to Korea and Taiwan were substantial. Both countries shipped smaller amounts of cotton to Bangladesh and Thailand fairly regularly in the past. Recently, Thailand expanded its textile industry and its imports from both suppliers.

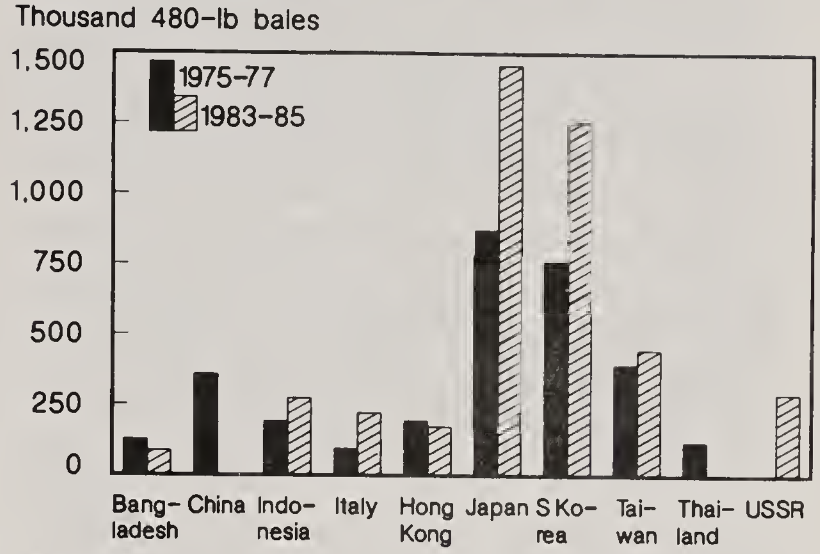
Government Institutions and Policies

The Government of Pakistan has implemented a variety of policies that affect cotton production, consumption, and trade. These include macroeconomic policies, which may affect specific commodities through their effect on the general economy; agricultural input policies, which may affect agricultural

Pakistan: Major Destinations of Cotton Exports



United States: Major Destinations of Cotton Exports



Fiscal years.

commodities by altering production costs; and policies specific to cotton. In general, macroeconomic and cotton-specific policies have tended to tax cotton producers, while input-based policies have tended to subsidize them, the overall effect being taxing. Consumers of cotton lint, namely manufacturers, have usually been subsidized.

Macroeconomic policies. From 1973 to 1982, the Pakistani rupee was pegged to the U.S. dollar, and was often overvalued. This overvaluation amounted to a tax on domestic producers of commodities like cotton, since their potential exports were less competitive than they could have been and competing imports were cheaper. Prices of fertilizer, including imports, were administered separately (see below). In 1982, the rupee was delinked from the U.S. dollar and a managed float was instituted. Currently, there is one official exchange rate; overvaluation, if any, is probably small.

Cotton policies and institutions. The Cotton Export Corporation (CEC) was established in 1973 to repair the poor reputation of the Pakistani cotton export trade regarding timeliness and quality. Since then, it has been the sole exporter of cotton from Pakistan, although the Government announced very recently that the private trade would be allowed to export as well. It is generally believed that the CEC has accomplished its main purpose. The CEC has incurred trading losses which have been covered by the Treasury. The CEC pays a 10-percent export duty on lint, but it is normally refunded.

The CEC usually ensures that the needs of the domestic textile industry are met before considering lint exports. Pakistani lint is of inherently high quality, but picking practices and the lack of grading and quality premiums actually reduce lint quality. The CEC has financed investment in cleaners in recent years, and gets all the cleaned output. Until very recently, when many more ginneries[3] were improved, it apparently had little trouble selling the higher-quality lint it received at a premium.

Support prices for producers are set by the Government, but market prices are usually higher. The producer subsidy equivalent calculations presented below show that cotton producers have typically been (implicitly) taxed by the Government's set of trade control and price support policies. These policies have kept input prices low for domestic yarn and cloth manufacturers, to try to keep this important industry competitive. Farmers normally sell seed cotton[4] to ginneries or ginnery agents, but the CEC stands ready to buy all suitable cotton lint at a comparable support price.

[3] Ginning is the mechanical process of separating lint from seeds.

[4] Seed cotton is the cottonseed together with the lint around it, as it is picked from the boll (seed pod) at harvest. Cottonseed is the seed that remains after the lint has been removed by ginning.

Because of the crop's importance, research has always been managed not by the Pakistan Agricultural Research Council (PARC) but by a separate agency, the Pakistan Central Cotton Committee (PCCC). Cotton breeding is conducted by various government agencies and universities, and the PCCC organizes coordinated national trials. New varieties are tested and released for a specific province, in order to reduce admixture of fibers of different quality during ginning. NIAB 78, possibly the most important new variety, was discovered by the Nuclear Institute for Agriculture and Biology, and released in 1983.

Input policies and institutions. Fertilizer is imported only by the Federal Directorate of Fertilizer Imports (FDFI), but fertilizer is freely available in the provinces through dealers and government outlets. FDFI uses international tenders to buy primarily phosphatic fertilizers. The Government has covered virtually all domestic marketing costs for both imported and domestically produced fertilizers. Fertilizer prices have been lower than world prices and uniform throughout the country.

In addition to the marketing-cost subsidy, fertilizer users have been assisted via a system of price-based subsidies and taxes on producers and marketers. High-cost domestic producers have been subsidized, and low-cost producers have been taxed (via the "development surcharge") to bring prices up to the ceiling. The Government has also subsidized the use of natural gas by fertilizer producers.

The subsidy on fertilizer prices has traditionally been a large part of the Government's agricultural budget. Since 1980, however, the Government has phased out fertilizer subsidies. While this has not yet been fully accomplished, the farm price of nitrogen nearly doubled between 1979/80 and 1986/87, while the price of phosphoric acid more than doubled.

Inputs other than fertilizer are also subsidized. Interest-free loans are provided to small farmers (those with less than five hectares), and the Agricultural Development Bank of Pakistan provides loans for agricultural production and investment at below-market rates. The agricultural sector has ordinarily consumed about 18 percent of all electricity, and the rate subsidy to agriculture is over 60 percent. Most pumps for tubewells use petroleum-based fuel, but electric pumps tend to be found on larger farms, and cotton also tends to be a large-farm crop. In supplying water to farmers, the Government recovers only part of its operating and maintenance expenditures on canal irrigation. The unrecovered part constitutes a subsidy to cotton and other producers who use surface irrigation water. The Government also directly subsidizes the sinking of tubewells.

Producer and Consumer Subsidy Equivalents

A subsidy equivalent is a measure of the overall value to a producer or consumer of a set of Government policy interventions. Ideally such an amount would exactly compensate an individual for the removal of all policies when their net effect is subsidizing. Conversely, it would exactly reimburse the Treasury for the removal of all policies when the net effect is implicitly taxing.

Methods and assumptions. In general, it is convenient (although not always most appropriate) to obtain budgetary figures from governments to use in calculating producer subsidy equivalents (PSEs) or consumer subsidy equivalents (CSEs). However, such data are not always available. Even when they are, the figures are rarely accompanied by explanations of their method of calculation. This often makes their use hazardous.

In the absence of well-understood budgetary figures, one must often resort to the general economic principle of a competitive price determined by a free market. By comparing a domestic price under policy restricted conditions with an import (or export) parity price derived from a world, free market price, one can deduce the degree of subsidization or taxation. An import parity price is a representative world price for a comparable commodity, (e.g., "B" index cotton) adjusted by an appropriate exchange rate and for the transformations of marketing, namely transportation, storage, and processing.

Import (and export) parity prices are used here to estimate the impact of cotton price control on both producers and consumers, and the impact of fertilizer price control on producers. The Government controls exports of cotton and also administers producer price supports. To jointly estimate the value of these actions to producers, domestic producer prices of seed cotton are compared with export parity prices. When it exports, the CEC pays a 10 percent export duty, but this is normally refunded, so the duty is ignored in the PSE calculations.

Subsidies and taxes on domestic fertilizer producers contribute to the maintenance of relatively low fertilizer prices. In this instance, the use of budgetary figures alone would ignore the reigning prices and would not correctly measure the impact on farmers. Thus, import parity prices (for nitrogen and phosphoric acid) are used. The share of fertilizer nutrients used on cotton is available from survey data. (Complete data for potash are unavailable, and since it is the least important of the three nutrients, it is ignored.)

Other components of the PSE and CSE are estimated by straightforward methods when data are available. To estimate the value of interest-free loans, loan volumes and market interest rates are used, together with the share of small farms (out of total small farms) reporting cotton production. For loans at subsidized interest rates, rate differentials, loan volumes, and estimated shares to cotton farmers are employed.

Similarly, calculations for electricity use the rate differential to agriculture, the amount of electricity used by agriculture, and the estimated share to cotton. This share is estimated as the share of irrigation water used by cotton, since pumps are the primary use for agricultural electricity.

For the canal water subsidy, official statistics are available on receipts and on operating and maintenance expenditures. They are also available for the total tubewell subsidy. The share of total irrigation water going to cotton is estimated directly from various data and estimates of total and irrigated area. Separate figures for the two types of irrigation (on cotton land) are unavailable.

Most subsidies on pesticides were discontinued as of 1980/81. Farmers must pay when provincial governments spray their fields, although these governments still subsidize the purchase of sprayers. Data on these subsidies are unavailable, however; they are presumed small and are ignored.

Results. Because of the nature of PSE/CSE calculations, the results presented in this report should be considered broad indicators of the main taxes and subsidies affecting cotton producers and consumers in Pakistan. The figures should not be interpreted as exact measurements of the impact of policies discussed.

The PSE calculations show that in most recent years, price supports and the control of exports together resulted in an implicit tax of about 15 to 35 percent on cotton producers. In 1982/83, this "tax" was at the higher end of the range, due to the recent unpegging of the rupee from the dollar and the devaluation of the rupee that ensued. This further raised the value of imported cotton relative to domestic cotton. The following year very poor production raised the price of domestic cotton, reducing the implicit taxation. In 1984/85, the rupee depreciated again significantly. Finally, in 1985/86, a glut forced world prices down, wiping out the subsidy effect of state control and price supports.

The implicit taxation from export controls has typically been partly offset by input subsidies. The value of these was 8 to 10 percent of the value of production. Fertilizer subsidies have remained the largest component of input subsidies, at about 60 percent, despite the Government's efforts to eliminate them. However, the rupee value of fertilizer subsidies did not increase significantly between 1982/83 and 1985/86, while the volume and value of cotton production increased by about 50 percent. Increases in domestic fertilizer prices prevented the value of the subsidy from increasing when fertilizer consumption rose. The net effect on cotton producers of input, output, and trade policies was small enough (less than 10 percent) to be considered a wash in 3 of the 5 years covered here. However, in 1982/83 and 1984/85, the effect was a significant tax.

Table 5--Estimates of producer subsidy equivalents for cotton in Pakistan: Summary1/

	UNIT	1981/82	1982/83	1983/84	1984/85	1985/86
A. Production	Thou. MT	2,270	2,470	1,428	3,022	3,630
B. Producer price	Rs/40 kg	187	190	296	204	201
C. Producer value	Mil. Rs.	10,612	11,733	10,567	15,412	18,241
D. Policy transfers to producers						
1. Support prices & state control of cotton trade	Mil. Rs.	-1,638	-4,308	-1,775	-5,341	39
Share of producer value	%	-15	-37	-17	-35	0
2. Assistance on inputs						
a. Fertilizer	Mil. Rs.	500	850	423	848	875
b. Credit	Mil. Rs.	72	93	149	185	206
c. Electricity	Mil. Rs.	139	150	151	157	194
d. Irrigation	Mil. Rs.	97	116	113	151	178
e. Total	Mil. Rs.	808	1,209	836	1,341	1,453
Share of producer value	%	8	10	8	9	8
3. Total policy tranfers to producers						
a. Total	Mil. Rs.	-830	-3,099	-939	-4,000	1,492
b. Share of producer value	%	-8	-26	-9	-26	8
c. Per ton	Rs/T.	-366	-1,255	-657	-1,324	411

1/September/August years.

SOURCES: ERS estimates from Government of Pakistan, USDA, and unpublished World Bank and Asian Development Bank data.

The effect of government policies on cotton consumers (i.e., manufacturers of yarn and cloth) has generally been the opposite of the effect on producers. Nevertheless, the CSE remained a subsidy throughout the entire period of the calculations, reflecting the stability of wholesale lint prices in the face of fluctuating supplies. This in turn may reflect the CEC's policy of supplying domestic markets adequately before considering exports. Only the devaluation in 1982/83 and the drop in world prices in 1985/86 moved the value of the subsidy from its "normal" level of 25 to 35 percent. The most consistent gainers from government policies were manufacturers; their employees and customers may also have benefited. The losers were producers (who received lower receipts due to restricted trade, sometimes offset by input subsidies) and taxpayers (due to input subsidies and occasional CEC losses).

Liberalization

In June 1987, the Commerce and Planning Minister announced a new economic package for the next 3 years, under which the Government removed the ban on exports of cotton (and rice) by the private sector. In September, the Commerce Department announced an export duty on cotton (and rice). At this time, little more is known of these new policies or their effects.

For many of the 14 years of its export monopoly, CEC reportedly did a better job of marketing cotton than the private trade had been doing in 1973. However, when the CEC

Table 6--Estimates of producer subsidy equivalents for cotton in Pakistan: Effects of support prices and state control of cotton trade1/

	Unit	1981/82	1982/83	1983/84	1984/85	1985/86
A. Supplier's export price	c/lb $/T.	64 1,422	67 1,470	81 1,777	60 1,313	41 902
B. Freight and insurance	$/bale $/T.	-3 -14	-3 -14	-3 -14	-3 -14	-3 -14
C. Exchange rate	Rs/$	10.55	12.75	13.48	15.16	16.13
D. Fob price	Rs/T.	14,854	18,562	23,771	19,697	14,332
E. Unloading, clearing & storage	Rs/T.	75	75	85	85	90
F. Domestic freight to ginnery	Rs/T.	165	180	185	215	230
G. Ginning and pressing cost	Rs/T.	2,088	2,206	2,206	2,529	2,647
H. Lint value net of processing	Rs/T.	12,526	16,101	21,295	16,868	11,365
I. Cottonseed price	Rs/T.	2,225	2,150	2,725	2,250	2,300
J. Crushing percentage		0.85	0.80	0.85	0.85	0.85
K. Cottonseed value net of processing	Rs/T.	1,891	1,719	2,314	1,913	1,955
L. Lint ginning percentage	%	34	34	34	34	34
M. Value of seed cotton at ginnery	Rs/T.	5,507	6,609	8,768	6,997	5,154
N. Transport to ginnery	Rs/T.	110	115	125	130	140
O. Farm price of imported cotton (seed cotton basis)	Rs/T.	5,397	6,494	8,643	6,867	5,014
P. Domestic producer price of seed cotton	Rs/T.	4,675	4,750	7,400	5,100	5,025
Q. Price difference	Rs/T.	-722	-1,744	-1,243	-1,767	11
R. PSE: State control	Mil. Rs.	-1,638	-4,308	-1,775	-5,341	39

1/September/August years.

SOURCE: ERS estimates from Government of Pakistan, USDA, and unpublished World Bank and Asian Development Bank data.

incurred losses (as it did in 1986/87), these were covered by the Treasury. Thus, if the CEC continues trading, the private sector may be competing with the Treasury. Otherwise, the CEC may be forced to eliminate all losses.

It was seen above that government policies with the strongest effects on cotton producers and consumers are control of trade and the fertilizer subsidy. The Government has striven to eliminate the latter, and has announced the abolition of the former. Pesticide subsidies have already been removed. The current policy climate, moreover, does not favor increases in other such subsidies. Thus, Pakistan appears to be moving towards a liberalization of its cotton sector. However, the recently imposed export duty could negate the effects of the earlier steps and return producers to a regime of low domestic prices. Information on the implementation of private-sector exports and the duty is not yet available. One likely reason for the duty is the Government's need for revenue at a time of budget deficits and in a political climate that appears to rule out an agricultural income tax.

Table 7--Estimates of consumer subsidy equivalents for cotton in Pakistan: Summary 1/

	UNIT	1981/82	1982/83	1983/84	1984/85	1985/86
A. Consumption	Thou.T	487	533	442	493	510
B. Consumer price	Rs/T.	11,950	12,675	18,900	14,600	12,350
C. Consumer cost	Mil.Rs	5,822	6,760	8,352	7,196	6,296
D. Consumer price difference due to state control	Rs/T.	2,952	6,027	4,956	5,182	2,072
E. Policy transfers to consumers	Mil.Rs	1,438	3,214	2,190	2,554	1,056
	%	25	48	26	35	17

1/September/August years.

SOURCE: ERS estimates from Government of Pakistan, USDA, and unpublished World Bank and Asian Development Bank data.

Table 8--Estimates of consumer subsidy equivalents for cotton in Pakistan: Effects of support prices and state control of cotton trade1/

	UNIT	1981/82	1982/83	1983/84	1984/85	1985/86
A. Supplier's export price	c/lb	64	67	81	60	41
	$/T.	1,419	1,475	1,777	1,313	902
B. Freight and insurance	$/bale	-3	-3	-3	-3	-3
	$/T.	-14	-14	-14	-14	-14
C. Exchange rate	Rs/$	10.55	12.75	13.48	15.16	16.13
D. Unloading, clearing & storage	Rs/T.	75	75	85	85	90
E. Import price	Rs/T.	14,902	18,702	23,856	19,782	14,422
F. Domestic wholesale price	Rs/T.	11,950	12,675	18,900	14,600	12,350
G. Calculated price difference due to state control	Rs/T.	2,952	6,027	4,956	5,182	2,072

1/September/August years.

SOURCE: ERS estimates from Government of Pakistan, USDA, and unpublished World Bank and Asian Development Bank data.

Competitiveness

Competitiveness can be thought of as the ability of a country or other entity to supply a commodity at a price lower than its competitors' in a free market. While government intervention blurs this definition somewhat, it is useful to look at the private sector component first. In the absence of intervention, a commodity's price is determined by its cost of production and its marketing costs. On both these accounts, the evidence suggests that Pakistan would be competitive in the world cotton market.

In 1985, the cost of production in the Punjab, including land rent and other fixed costs, was estimated by the Agricultural Prices Commission to be about Rs. 2700 per acre. The lint yield was 559 kg/ha that year, and the rupee was about 16 to the U.S. dollar. These figures yield a total production cost of about 34 cents/pound. Yields and costs of production are lower in the Sind, resulting in a

cost per pound that is the same or a little lower. When land and other long-run costs are excluded, the national average cost of production in the following year (1986) was about Rs. 2000 per acre, equivalent to a variable cost of production of about 25 cents/pound.

Domestic marketing costs (transportation to the ginnery, ginning and pressing, transport to the port, and port handling and clearing) were about 10 cents/pound in 1985/86[5], and overseas freight charges to Europe added another 6 cents/pound. Comparable world cotton prices in the eighties have often been about 60 cents/pound ("B" Index, cif N. Eur.). They dropped below 40 cents/pound (Pakistan's approximate breakeven export cost) only from May through September 1986, going below 30 cents in July and August. These data show that Pakistan's private sector would normally be able to produce and market cotton at a profit for the world market.

It is clear that Pakistani cotton farmers are competitive not because of subsidies but because of a relatively ideal agro-climatic environment and recent technological improvements in cotton cultivation. In the midst of a world glut, domestic market prices for seed cotton remained above the support price in 1986/87. In addition, the port of Karachi has been modernized and now provides efficient service to exporters. Moreover, the CEC appears to have gained the required expertise and reputation to carry out international marketing.

In 1986/87, however, the CEC incurred substantial trading losses totaling about $130 million[6]. The world cotton market was glutted, and prices had been falling steadily since May 1984. With a trade deficit that was troublesome and cotton a major export, it is perhaps not surprising that the Government bought cotton at higher prices than it could sell it abroad, since the exports still generated substantial foreign exchange.

[5]This calculation, unlike the PSE method, does not allow for any income from cottonseed sales. It is an estimate of private sector marketing costs, so it also does not include any allowance for bureaucratic or other overhead which the CEC might incur.

[6]*1986-87 Economic Survey*, Ministry of Finance, Government of Pakistan, p. 110.

Several technical factors and policy issues will determine whether Pakistan's production and exports of cotton will continue to grow. By world standards there is still room for yield increases in Pakistan, which is a major reason to be sanguine about future production. However, the recent improvements in yield have occurred almost entirely in the Punjab, largely because NIAB-78 and other improved varieties were released only for that province. It remains to be seen whether farmers in the Sind will get access to the same number and quality of improved varieties and seed. Another unknown is the Government's response to the unauthorized spread of NIAB-78 in the Sind.

Varietal concentration is always a possibility when one variety, like NIAB-78, has outstanding characteristics. An overwhelming majority of farmers, making individual decisions, may plant such a variety, leaving the nation's production vulnerable to pests that were not serious problems when several varieties were in use. So far no such problem has been detected, however.

Pesticide use on cotton has been trending upward, and it has been credited with some of the yield increase. Cotton now has the highest pesticide use per hectare of the three major kharif crops, and expenditures on pesticides are substantial. While the use of plant protection measures may not continue to expand steadily, this may not prevent further increases in yield, as a significant degree of protection has already been achieved.

Policy issues also present some uncertainties. The Government has announced that the private sector will be allowed to export cotton, but regulations to implement this policy have not been finalized. It may be difficult for the Government to give up control of such an important export commodity at a time when trade deficits are quite visible. Moreover, the need to mobilize resources may result in the retention of the export duty, which in the CEC period could not unambiguously be said to have contributed revenue.

The other major policy issue is the fertilizer subsidy. The Government has consistently tried to eliminate it, and has made some progress. Amid the recent price increases, total nutrient use and use per

hectare have increased from plateau to plateau. Will they continue to do so if the Government keeps raising fertilizer prices?

Pakistan is likely to remain a strong competitor in the world cotton market, largely because it is a low-cost producer. Most of the production-related uncertainties concern additions to the production base rather than the base itself. Moreover, the demand for raw cotton by domestic processing industries has not shown any tendency to overtake supply, so Pakistan's exportable surplus should continue to be substantial.

Appendix 1--Supply and use of wheat in South Asia

Country	Area	Yield	Production	Imports	Exports	Disappearance: Food Total	Disappearance: Food Per capita	Disappearance: Feed	Disappearance: Total	Ending stocks	July/June trade: Imports Total	July/June trade: Imports U.S.	July/June trade: Exports
	1,000 ha.	Tons/ ha.	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Kgs.	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Bangladesh (July/June):													
1981/82	534	1.81	967	1,111	0	2,267	25.0	90	2,357	277	1,111	533	0
1982/83	519	2.11	1,095	1,500	0	2,546	27.3	0	2,546	326	1,500	550	0
1983/84	530	2.28	1,210	1,876	0	2,702	28.2	0	2,702	710	1,876	600	0
1984/85	676	2.17	1,464	1,898	0	3,530	35.8	0	3,530	542	1,898	886	0
1985/86	540	1.93	1,042	1,164	0	2,125	21.0	0	2,125	623	1,164	574	0
1986/87	600	1.81	1,091	1,500	0	2,724	26.1	0	2,724	490	1,500	600	0
1987/88*	650	2.15	1,400	2,400	0	3,400	32.1	0	3,400	890	2,400	1,000	0
India (April/March):													
1981/82	22,279	1.63	36,313	2,000	0	36,013	51.1	300	36,313	6,000	2,265	1,515	0
1982/83	22,144	1.69	37,452	2,486	100	37,538	52.2	300	37,838	8,000	3,700	3,700	100
1983/84	23,567	1.82	42,794	3,270	35	41,729	56.7	300	42,029	12,000	2,500	1,290	35
1984/85	24,672	1.84	45,476	700	100	42,776	56.9	300	43,076	15,000	150	64	150
1985/86	23,564	1.87	44,069	50	400	43,319	56.4	400	43,719	15,000	50	32	400
1986/87	23,074	2.03	46,885	85	400	45,170	57.6	400	45,570	16,000	85	0	400
1987/88*	23,300	1.97	46,000	100	500	51,200	63.9	400	51,600	9,000	100	0	500
Nepal (July/June):													
1981/82	380	1.38	526	28	0	554	36.0	0	554	0	28	7	0
1982/83	482	1.37	660	30	0	690	43.8	0	690	0	30	10	0
1983/84	400	1.59	634	4	0	638	39.5	0	638	0	4	4	0
1984/85	452	1.18	534	1	0	535	32.3	0	535	0	1	1	0
1985/86	480	1.25	598	0	0	598	35.2	0	598	0	0	0	0
1986/87	533	1.29	686	0	0	686	39.4	0	686	0	0	0	0
1987/88*	530	1.30	690	0	0	690	38.6	0	690	0	0	0	0
Pakistan (May/April):													
1981/82	6,982	1.64	11,473	346	0	11,215	122.6	0	11,215	1,579	400	200	0
1982/83	7,223	1.57	11,304	570	78	11,521	122.4	0	11,521	1,854	580	178	53
1983/84	7,398	1.68	12,414	393	205	12,000	124.2	0	12,000	2,456	366	177	219
1984/85	7,326	1.49	10,882	1,042	49	12,312	124.1	0	12,312	2,019	1,036	293	49
1985/86	7,403	1.58	11,703	1,832	0	12,654	124.2	100	12,754	2,800	1,534	1,086	0
1986/87	7,403	1.88	13,922	374	0	13,100	125.2	100	13,200	3,896	370	230	0
1987/88*	7,706	1.58	12,200	375	0	13,451	125.7	150	13,601	2,870	370	330	0
Sri Lanka (January/December) 1/:													
1981/82	0	--	0	495	0	498	32.3	0	498	92	529	341	0
1982/83	0	--	0	572	0	586	37.2	0	586	78	474	318	0
1983/84	0	--	0	571	0	571	35.6	0	571	78	648	281	0
1984/85	0	--	0	571	0	567	34.7	0	567	82	648	281	0
1985/86	0	--	0	665	0	640	38.5	0	640	107	593	229	0
1986/87	0	--	0	675	0	660	39.0	0	660	122	555	200	0
1987/88*	0	--	0	680	0	680	39.4	0	680	122	700	250	0

*Estimated.
1/ January/December of first year.

SOURCES: Official government data in each country; USDA estimates.

Appendix 2--Supply and use of rice in South Asia

Country	Area	Yield	Production	Imports	Exports	Disappearance: Food: Total	Disappearance: Food: Per capita	Disappearance: Feed	Disappearance: Total	Ending stocks	Calendar year trade 2/: Imports: Total	Calendar year trade 2/: Imports: U.S.	Calendar year trade 2/: Exports
	1,000 ha.	Tons/ ha.	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Kgs.	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Bangladesh (July/June):													
1981/82	10,459	1.30	13,631	144	20	14,113	155.7	0	14,113	338	296	55	0
1982/83	10,587	1.34	14,216	317	0	14,571	156.2	0	14,571	300	82	35	0
1983/84	10,546	1.37	14,500	180	0	14,890	155.2	0	14,890	90	588	67	0
1984/85	10,140	1.44	14,620	690	0	14,925	151.3	0	14,925	475	256	67	0
1985/86	10,403	1.45	15,040	39	0	15,201	149.9	0	15,201	353	90	64	0
1986/87	10,673	1.44	15,406	300	0	15,840	152.0	0	15,840	219	900	125	0
1987/88*	10,800	1.37	14,750	650	0	15,370	143.6	0	15,370	249	250	50	0
India (October/September):													
1981/82	40,708	1.31	53,248	10	675	54,083	76.8	0	54,083	5,000	10	0	633
1982/83	38,262	1.23	47,116	80	200	48,496	67.4	0	48,496	3,500	315	0	200
1983/84	41,244	1.46	60,097	850	220	58,227	79.2	0	58,227	6,000	560	10	200
1984/85	41,159	1.42	58,337	10	160	56,687	75.4	0	56,687	7,500	10	10	200
1985/86	40,912	1.57	64,153	5	250	62,408	81.3	0	62,408	9,000	10	5	200
1986/87	41,000	1.46	60,000	5	200	59,805	76.3	0	59,805	9,000	5	2	200
1987/88*	39,000	1.23	48,000	0	200	51,800	64.7	0	51,800	5,000	0	0	200
Nepal (July/June):													
1981/82	1,297	1.32	1,706	8	62	1,652	107.4	0	1,652	0	33	0	50
1982/83	1,263	.97	1,220	50	0	1,270	80.5	0	1,270	0	25	0	0
1983/84	1,334	1.38	1,838	0	20	1,768	109.3	0	1,768	50	0	0	20
1984/85	1,377	1.31	1,804	0	50	1,804	108.8	0	1,804	0	0	0	50
1985/86	1,391	1.34	1,867	25	0	1,892	111.3	0	1,892	0	25	0	0
1986/87	1,333	1.19	1,580	25	0	1,605	92.1	0	1,605	0	25	0	0
1987/88*	1,350	1.17	1,580	0	0	1,580	88.5	0	1,580	0	0	0	0
Pakistan (July/June):													
1981/82	1,976	1.74	3,430	0	840	2,379	26.1	0	2,379	440	0	0	794
1982/83	1,978	1.74	3,445	0	1,146	2,250	23.9	0	2,250	489	0	0	1,299
1983/84	1,998	1.67	3,339	0	1,172	2,320	24.0	0	2,320	336	0	0	1,050
1984/85	1,998	1.66	3,315	0	836	2,400	24.2	0	2,400	415	0	0	962
1985/86	1,863	1.57	2,919	0	1,297	1,857	18.3	0	1,857	180	0	0	1,146
1986/87	2,082	1.69	3,522	0	1,300	2,150	20.6	0	2,150	252	0	0	1,400
1987/88*	1,795	1.73	3,100	0	1,100	2,050	19.1	0	2,050	202	0	0	1,100
Sri Lanka (January/December) 1/:													
1981/82	819	1.79	1,469	168	0	1,644	106.5	0	1,644	96	217	0	0
1982/83	747	1.96	1,466	217	0	1,640	104.2	0	1,640	139	157	0	0
1983/84	777	2.17	1,688	157	0	1,750	109.1	0	1,750	234	40	0	0
1984/85	886	1.85	1,640	40	0	1,790	109.6	0	1,790	124	195	0	0
1985/86	864	2.09	1,809	195	0	1,900	114.2	0	1,900	228	220	0	0
1986/87	837	2.11	1,765	220	0	1,915	113.0	0	1,915	298	120	0	0
1987/88	850	1.76	1,500	120	0	1,848	107.2	0	1,848	70	150	0	0

*Estimated.
1/ January/December of first year. 2/ January-December of second year.

SOURCES: Official government data in each country; USDA estimates.

Appendix 3--Supply and use of coarse grain in South Asia

Country	Area	Yield	Production	Imports	Exports	Disappearance: Food: Total	Disappearance: Food: Per capita	Disappearance: Feed	Disappearance: Total	Ending stocks	July/June trade: Imports: Total	July/June trade: Imports: U.S.	July/June trade: Exports
	1,000 ha.	Tons/ ha.	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Kgs.	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Bangladesh (July/June):													
1981/82	72	.71	51	3	0	48	.5	6	54	0	3	0	0
1982/83	72	.72	52	3	0	48	.5	7	55	0	1	0	0
1983/84	71	.73	52	1	0	46	.5	7	53	0	1	0	0
1984/85	71	.73	52	0	0	46	.5	6	52	0	0	0	0
1985/86	71	.73	52	0	0	46	.5	6	52	0	0	0	0
1986/87	71	.73	52	0	0	52	.5	0	52	0	0	0	0
1987/88*	71	.73	52	0	0	52	.5	0	52	0	0	0	0
India (October/September):													
1981/82	42,273	.74	31,388	0	54	29,514	42.9	1,820	31,334	1,700	0	0	60
1982/83	40,677	.69	27,878	0	3	26,405	36.7	1,870	28,275	1,300	5	5	7
1983/84	41,802	.81	33,940	0	10	30,810	41.9	2,120	32,930	2,300	0	0	10
1984/85	39,345	.80	31,448	0	11	30,267	40.3	2,070	32,337	1,400	0	0	11
1985/86	39,134	.67	26,072	0	10	24,802	32.3	2,060	26,862	600	0	0	10
1986/87	39,529	.71	27,952	0	10	25,832	33.0	2,210	28,042	500	0	0	10
1987/88*	35,850	.66	23,500	50	5	22,915	28.6	1,110	24,025	20	0	0	5
Nepal (July/June):													
1981/82	627	1.44	905	0	16	889	57.8	0	889	0	0	0	16
1982/83	660	1.32	869	3	0	872	55.3	0	872	0	3	0	0
1983/84	654	1.40	913	0	0	913	56.5	0	913	0	0	0	0
1984/85	732	1.33	974	0	0	974	58.8	0	974	0	0	0	0
1985/86	769	1.34	1,027	0	0	1,027	60.4	0	1,027	0	0	0	0
1986/87	807	1.28	1,031	0	0	1,031	59.2	0	1,031	0	0	0	0
1987/88*	810	1.28	1,033	0	0	1,033	57.8	0	1,033	0	0	0	0
Pakistan (July/June):													
1981/82	1,920	.83	1,585	0	0	1,585	17.3	0	1,585	0	0	0	0
1982/83	1,840	.87	1,604	0	0	1,604	17.0	0	1,604	0	0	0	0
1983/84	1,916	.86	1,646	0	30	1,616	16.7	0	1,616	0	0	0	30
1984/85	1,863	.87	1,627	0	3	1,624	16.4	0	1,624	0	0	0	5
1985/86	1,826	.87	1,589	0	0	1,283	12.6	306	1,589	0	0	0	0
1986/87	1,871	.93	1,738	0	0	1,408	13.5	330	1,738	0	0	0	0
1987/88*	1,862	.86	1,595	0	0	1,262	11.7	333	1,595	0	0	0	0
Sri Lanka (January/December) 1/:													
1981/82	25	.64	16	0	0	16	1.0	0	16	0	0	0	0
1982/83	25	.64	16	0	0	16	1.0	0	16	0	0	0	0
1983/84	25	.64	16	16	0	32	2.0	0	32	0	16	0	0
1984/85	25	.64	16	179	0	195	11.9	0	195	0	179	32	0
1985/86	25	.64	16	20	0	36	2.2	0	36	0	30	0	0
1986/87	25	.64	16	20	0	36	2.1	0	36	0	20	0	0
1987/88*	24	.63	15	20	0	35	2.0	0	35	0	20	0	0

*Estimated.
1/ January/December of first year.

SOURCES: Official government data in each country; USDA estimates.

Appendix 4--Supply and use of cotton in South Asia (August/July years)

Country	Area	Yield	Production	Imports	Exports	Disappearance: Use	Disappearance: Loss	Disappearance: Total	Ending stocks	U.S. exports 1/
	1,000 ha.	Kgs./ ha.	1,000 480- lb. bales							
Bangladesh:										
1981/82	17	282	22	193	3	198	6	204	44	76
1982/83	20	196	18	208	2	225	5	230	38	62
1983/84	17	192	15	266	1	202	17	219	99	137
1984/85	13	184	11	247	1	231	10	241	115	61
1985/86	13	234	14	186	1	253	6	259	55	11
1986/87	12	200	11	300	1	260	6	266	99	62
1987/88*	13	251	15	275	1	275	6	281	107	44
India:										
1981/82	7,987	186	6,807	39	273	5,985	0	5,985	2,120	0
1982/83	7,871	194	7,004	0	557	6,383	0	6,383	2,184	0
1983/84	7,765	171	6,086	0	276	6,614	0	6,614	1,380	0
1984/85	7,437	232	7,925	0	132	7,117	0	7,117	2,056	0
1985/86	7,581	240	8,355	59	344	7,191	0	7,191	2,935	0
1986/87	7,280	222	7,418	0	1,130	7,850	0	7,850	1,373	0
1987/88*	7,500	224	7,700	100	250	7,700	0	7,700	1,223	0
Pakistan:										
1981/82	2,215	343	3,494	5	1,097	2,238	158	2,396	241	1
1982/83	2,263	364	3,781	4	1,273	2,450	150	2,600	153	1
1983/84	2,221	214	2,188	279	377	2,030	120	2,150	93	127
1984/85	2,236	451	4,628	26	1,261	2,264	172	2,436	1,050	1
1985/86	2,366	522	5,669	6	3,148	2,503	161	2,664	913	3
1986/87	2,502	527	6,060	5	2,885	2,824	165	2,989	1,104	3
1987/88*	2,515	502	5,800	5	2,900	3,125	170	3,295	714	3

* = Estimated.

1/ U.S. export data are for October/September years.

SOURCES: Official government data in each country; USDA estimates.

Appendix 5--Supply and use of oilseeds in South Asia (October/September) 1/

Country	Area	Yield	Production	Imports	Exports	Crush	Food use	Feed, seed & waste	Total use	Ending stocks
	1,000 ha.	Kgs./ ha.	1,000 tons							
Bangladesh:										
1980/81	248	625	155	25	0	165	6	9	180	7
1981/82	243	667	162	18	0	161	5	15	181	6
1982/83	242	653	158	22	0	164	5	11	180	6
1983/84	240	696	167	20	0	169	3	11	183	10
1984/85	243	708	172	10	0	168	4	10	182	10
1985/86	238	706	168	10	0	166	4	11	181	7
1986/87	226	681	154	50	0	190	4	11	205	6
1987/88*	243	728	177	30	0	187	5	11	203	10
India:										
1980/81	25,780	463	11,943	12	84	9,412	594	1,946	11,951	200
1981/82	27,564	552	15,213	5	58	11,848	795	2,317	14,960	400
1982/83	26,128	499	13,036	5	47	10,550	637	2,007	13,194	200
1983/84	26,913	566	15,234	5	70	11,899	801	2,069	14,769	600
1984/85	26,775	608	16,284	5	51	13,474	781	2,283	16,538	300
1985/86	26,897	553	14,881	0	26	12,227	687	2,241	15,155	0
1986/87	27,288	552	15,063	5	50	12,085	744	2,189	15,018	0
1987/88	26,340	524	13,795	400	20	11,499	650	2,026	14,475	0
Pakistan:										
1980/81	2,590	676	1,750	0	0	1,461	52	237	1,750	0
1981/82	2,693	680	1,831	0	0	1,520	66	245	1,831	0
1982/83	2,752	729	2,006	0	0	1,564	76	366	2,006	0
1983/84	2,635	511	1,347	0	0	1,085	80	182	1,347	0
1984/85	2,674	876	2,342	0	0	1,953	62	327	2,342	0
1985/86	2,819	1,000	2,819	0	0	2,366	56	397	2,819	0
1986/87	2,983	1,008	3,006	0	0	2,519	67	420	3,006	0
1987/88*	2,998	966	2,895	0	0	2,433	58	404	2,895	0
Sri Lanka:										
1980/81	NA	NA	128	0	2	126	0	0	126	4
1981/82	NA	NA	174	0	3	168	0	0	168	7
1982/83	140	986	138	0	4	141	0	0	141	0
1983/84	139	446	62	0	2	59	0	0	59	1
1984/85	139	1,727	240	0	10	211	0	0	211	20
1985/86	139	1,669	232	0	10	232	0	0	232	10
1986/87	139	719	100	0	2	108	0	0	108	0
1987/88*	139	1,079	150	0	4	145	0	0	145	1

* = Estimated. NA = Not available.

1/ Coverage includes copra, cottonseed, flaxseed, peanuts, nigerseed, rapeseed, safflower, sesame, soybeans, and sunflowerseed.

SOURCES: Official government data in each country; USDA estimates.

Appendix 6—Supply and use of vegetable oils in South Asia (October/September) 1/

Country	Production	Imports: Soybean Total	Imports: Soybean U.S.	Imports: Palm	Imports: Other	Imports: Total	Exports	Disappearance: Total	Disappearance: Per capita	Ending stocks
	1,000 tons								Kgs.	1,000 tons
Bangladesh:										
1980/81	56	27	26	84	13	124	0	145	1.6	53
1981/82	54	37	34	75	23	135	0	191	2.0	51
1982/83	55	67	24	63	18	148	0	191	2.0	63
1983/84	57	40	15	88	8	136	0	177	1.8	79
1984/85	57	40	14	146	21	207	0	210	2.1	133
1985/86	56	49	14	220	26	295	30	307	3.0	147
1986/87	63	100	37	180	20	300	0	330	3.2	180
1987/88*	61	100	35	150	10	260	0	350	3.3	151
India:										
1980/81	2,668	639	62	431	223	1,293	0	3,981	5.8	160
1981/82	3,392	460	68	410	92	962	0	4,434	6.3	80
1982/83	2,974	537	55	597	125	1,259	0	4,163	5.8	150
1983/84	3,376	808	169	557	332	1,697	0	4,833	6.6	390
1984/85	3,775	398	63	728	229	1,355	0	5,160	6.9	360
1985/86	3,370	250	38	798	150	1,198	0	4,638	6.0	290
1986/87	3,374	360	47	880	300	1,540	0	4,804	6.1	400
1987/88*	3,174	360	50	900	450	1,710	0	4,884	6.1	400
Pakistan:										
1980/81	225	214	126	226	15	455	0	693	7.8	62
1981/82	240	291	260	273	9	573	0	808	8.8	67
1982/83	256	306	237	349	8	663	0	917	9.7	69
1983/84	190	301	216	328	1	630	0	812	8.4	77
1984/85	289	189	168	487	4	680	0	971	9.8	75
1985/86	344	314	275	692	1	1,007	0	1,106	10.9	320
1986.87	363	200	147	360	45	605	0	1,088	10.4	200
1987/88*	353	400	400	350	25	775	0	1,133	10.6	195
Sri Lanka:										
1980/81	78	1	--	12	0	13	18	73	4.8	0
1981/82	103	1	1	3	0	4	39	68	4.4	0
1982/83	83	1	1	8	0	9	34	58	3.7	0
1983/84	37	1	1	5	1	7	12	32	2.0	0
1984/85	128	0	--	3	0	3	66	65	4.0	0
1985/86	143	1	1	17	0	18	85	76	4.6	0
1986/87	67	0	--	20	0	20	25	62	3.7	0
1987/88	90	0	--	20	0	20	30	80	4.6	0

* = Estimated. -- = Less than 500 tons.

1/ Coverage includes coconut, cottonseed, flaxseed, peanut, nigerseed, palm, rapeseed, safflower, sesame, soybeans, and sunflower oil.

SOURCES: Official government data in each country; USDA estimates.

Appendix 7--U.S. agricultural exports to South Asia by country and major commodity, U.S. fiscal years (October/September)

	Bangladesh			India			Nepal			Pakistan			Sri Lanka			Total		
	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987
	1,000 tons																	
Animals & products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nonfat dry milk	.0	.0	.0	6.8	.5	.0	1.8	1.4	.0	11.0	3.7	.0	1.2	1.6	6.4	20.8	7.2	6.4
Tallow, inedible	.0	.0	.0	.1	.4	.1	.0	.0	.0	80.2	82.2	42.8	.0	.0	.0	80.3	82.6	43.0
Grains & prep.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wheat	1072.8	631.8	712.8	49.8	2.0	.0	.0	.0	.0	450.8	918.3	194.8	169.7	351.5	355.0	1743.0	1903.6	1262.5
Wheat flour	.0	.0	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0	3.0	1.7	1.5	3.6	1.7	1.5
Bulgur wheat	.0	.0	.0	99.4	121.0	61.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	99.4	121.0	61.4
Rice	80.3	63.6	26.1	8.8	6.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	89.1	69.8	26.1
Feed grains	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	31.6	.0	11.6	31.6	.0	11.6
Blended food prod.	.0	.0	.0	71.3	93.0	99.0	3.5	2.7	.0	.0	.0	.0	5.2	2.2	.0	80.0	97.9	99.0
Fruits & prep.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nuts & prep.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vegetables & prep.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pulses	.0	.0	.0	26.2	21.2	24.4	.0	.0	.0	.0	.0	.0	.0	.0	.0	26.2	21.2	24.4
Oilseeds & prod.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Oilcake & meal	.0	.0	.0	.0	.0	.1	.0	.0	.0	4.6	.0	.0	.0	.0	.0	24.6	.0	.1
Oils & waxes	14.3	13.7	37.4	62.8	37.6	47.3	.1	.1	.0	168.4	275.9	146.7	.4	.5	.2	246.1	327.9	231.6
Soybean oil	14.3	13.7	37.4	62.8	37.6	47.1	.1	.1	.0	168.4	274.9	146.7	.4	.5	.2	246.1	326.8	231.3
Tobacco, unmanuf.	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.2	.3	.0	.0	.0	.2	.2	.3
Cotton, ex. lint.	13.7	2.4	13.6	.1	.0	.0	.0	.0	.0	.3	.6	.6	.8	.5	.1	14.9	3.5	14.2
Essential oils	.0	.0	.0	.2	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.2	.1
Seeds, fld. & gard.	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.3	1.0	.0	.0	.0	.1	.4	1.0
Other veg. prod.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Million dollars																	
Total	205.4	94.1	111.1	129.4	90.4	93.0	2.6	2.2	.9	229.0	285.3	98.2	33.9	44.7	42.1	600.3	516.6	345.2
Animals & prod.	.0	.0	5.4	5.3	4.4	23.4	1.1	.9	.9	44.9	29.0	18.6	1.0	1.1	4.5	52.3	35.4	52.8
Nonfat dry milk	.0	.0	.0	4.1	.3	.0	1.1	.8	.0	6.4	2.2	.0	.7	.9	4.0	12.3	4.3	4.0
Tallow, inedible	.0	.0	.0	.1	.3	.1	.0	.0	.0	37.7	26.3	13.0	.0	.0	.0	37.8	26.7	13.2
Grains & prep.	175.6	84.9	75.9	53.2	52.1	33.3	1.2	.8	.0	59.8	125.7	21.0	31.2	42.1	36.9	321.0	305.6	167.1
Wheat	149.1	74.9	70.9	7.2	.3	.0	.0	.0	.0	59.7	125.7	20.8	25.1	40.9	35.7	241.1	241.8	127.4
Wheat flour	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.7	.3	.3	.8	.3	.3
Bulgur wheat	.0	.0	.0	21.3	23.9	9.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	21.3	23.9	9.6
Rice	26.5	10.0	5.0	2.3	1.8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	28.8	11.8	5.0
Feed grains	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	3.7	.0	.9	3.7	.0	.9
Blended food prod	.0	.0	.0	22.3	25.9	23.5	1.1	.8	.0	.0	.0	.0	1.7	.8	.0	25.1	27.5	23.5
Fruits & prep.	.0	.0	.0	.5	.1	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.5	.3	.1
Nuts & prep.	.0	.0	.1	6.2	3.4	3.4	.2	.5	.1	.0	.0	.0	.0	.0	.0	6.4	3.9	3.5
Vegetables & prep.	.0	.0	.0	8.1	7.4	7.4	.0	.0	.0	.2	.3	.1	.0	.0	.0	8.3	7.7	7.5
Pulses	.0	.0	.0	7.9	7.0	6.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	7.9	7.0	6.7
Oilseeds & prod.	9.8	5.4	14.3	47.2	21.9	23.9	.1	.0	.0	119.4	125.6	52.6	.4	.5	.2	176.8	153.4	91.1
Oilcake & meal	.0	.0	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	.0	.0	.0	.7	.0	.0
Oils & waxes	9.8	5.4	14.3	47.1	21.8	23.8	.1	.0	.0	118.6	125.3	52.3	.3	.3	.1	175.9	152.8	90.5
Soybean	9.8	5.4	14.3	47.1	21.7	23.5	.1	.0	.0	118.6	124.9	52.3	.3	.3	.1	175.9	152.4	90.1
Tobacco, unmanuf.	.0	.0	.0	.0	.1	.0	.0	.0	.0	1.9	1.1	2.4	.0	.0	.0	1.9	1.1	2.4
Cotton, ex. lint.	19.7	3.2	15.2	.1	.0	.0	.0	.0	.0	.7	1.3	1.4	1.0	.8	.1	21.5	5.2	16.7
Essential oils	.0	.0	.0	.4	.4	.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.5	.4	.7
Seeds, fld. & gard.	.0	.0	.0	.1	.1	.0	.0	.0	.0	.4	.9	.9	.0	.1	.3	.5	1.1	1.2
Other veg. prod.	.3	.6	.1	8.4	.5	.8	.0	.0	.0	1.7	1.4	1.0	.1	.0	.0	10.5	2.5	2.0

NA = Not applicable.

SOURCE: U.S. Department of Commerce, Bureau of the Census.

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